The Plough, the Loom, and the Anvil.

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HEAR BOTH SIDES.

A LETTER recently received from one of our correspondents, closes with the following sentence:—"I am quite a believer in your reiterated opinion respecting factories, but I cannot as yet understand why a high protective tariff is necessary to make them thrive." Desirous to satisfy the mind of our friendly correspondent on this subject, we had appropriated the leading article of this month to a full examination of it, but, after making some progress therein, found that it would occupy more space than could be given in a single number, and as this is the last one of the year, concluded to postpone it to the next volume. Another cause, too, influenced us to this decision. On looking over our file we met with a promise, made some months since, to examine more fully an attack upon this work and its doctrines, that appeared in "The Union," the official organ of the late administration, and was endorsed by its editor as "a masterly view of the question." With this endorsement, made so near to the Treasury, we have a right to view it as the proper complement to the report of the late Secretary, and as containing the views upon which that elaborate document was based. Desirous that the farmers and planters of the Union should have before them for consideration the grounds upon which they are invited to aid in maintaining a system that *compels* them to seek abroad a market they would gladly have at home, and to fly to the West, there to clear and cultivate poor soils, when if they could remain at home they might have rich ones; and desirous, too, that our readers may see that in any thing we may say in regard to this extraordinary paper, we do not exaggerate; we now give it ***in extenso***, preserving even the *italics*, that our readers may see which are the passages deemed by its author to be most entitled to consideration. Without this, we should greatly fear that they might suppose we had been disposed to caricature the arguments of our opponents, as the latter most certainly have desired to do by ours.

"THE PLOUGH, THE LOOM, AND THE ANVIL."

I take it for granted that it is well known that, under the title above quoted, John S. Skinner, Esq., late editor of "The Farmers' Library," has commenced the publication of a monthly periodical, *professedly* devoted to the agricultural interest, and appealing to that interest for patronage and support, but *really* acting as the champion of the manufacturing and mining interests, which, although far more wealthy in proportion to the number of persons engaged in them than the agricultural interest, are constantly clamoring for *protection*—in other words, for the privilege of taxing, through the instrumentality of the legislation of Congress, the great mass of the American people for the benefit of the few lordly proprietors of looms, spindles, and iron mines. Judging from the character of the original articles which appear in his new journal, it is evident that Mr. Skinner's whole aim is to resuscitate the exploded protective system; and hence, in order to disarm of all fears and suspicions the planters and farmers, who are to be the victims, he insidiously approaches them under the plausible and insinuating pretext of a proposition to unite the interests of "the plough, the loom, and the anvil," as if they had ever, under ordinary circumstances, in a civilized country, been separated. The object sought, and the indirect mode of attaining it, are consistent with the creed and the policy of the school of politics

in which Mr. Skinner has been reared, and of which he has through a long life been a devoted disciple; although, in candor, I must admit that, in my opinion, he honestly believes in the theories which he advocates.

But, it is due to the agricultural interest that the disguise be stripped from this patronising friend, and particularly so, inasmuch as his theories are adopted and endorsed by "The National Intelligencer," the leading Federal print in the country—by which term I mean Conservative, in the English sense of the word: which is, in point of fact, the Tory party in England. The Conservatives in England have always stood bravely by old abuses, monopolies, privileges, titles, and dignities, but not with more stolid pertinacity than their counterpart, the self-styled Conservative or Whig party of this country, who are but the imitators and echoes of the Conservative Tories of England. I am, however, wandering from my subject. My purpose was to examine the theory of Mr. Skinner in the shape in which it is shadowed forth under the mystical and plausible title of "*The Plough, the Loom, and the Anvil*," and advocated in the pages of the new periodical published by him.

The theory, as I understand the venerable and respectable gentleman, is, that the labor of a nation should be so shaped by its legislation that each of its different divisions should produce just enough of its articles or products as will suffice to supply the wants of the whole nation, and no more. In other words, the plough, representing the agriculturists, should have by its side a sufficient number of those engaged in operating the loom and the anvil to consume all its surplus products, in order that it shall not be compelled to go abroad to search out markets and customers for those products. And, on the other hand, the loom must have enough agriculturists, &c., by its side to consume all the cloth it weaves, in order that it may not be compelled to go to foreign countries to seek markets and consumers. And so of the anvil.

Now this must be the true interpretation of Mr. Skinner's scheme, represented by the three cabalistic words which he has adopted as the title of his new periodical, or they mean nothing. It will not do for him to say that he is looking out only for the agriculturist; for that would be an acknowledgment that his scheme was a deception and a device for mischief and injury to other interests. Therefore, when he gets his plan into practical operation, he must preserve the balance. After taking from agriculture, and putting to the loom and anvil, a sufficient number of persons to consume the surplus agricultural productions of the country, he causes those two instruments to over-produce—that is, make too much cloth and iron for the consumption of the nation, and thus compel them to go to foreign countries for markets and consumers—he must again equalize, by transferring them back to agriculture—involving, of course, the movement of immense amounts of capital, and the loss of vast sums in machinery and apparatus. If he does not make these transfers of men and capital from one interest to another, as the production of one exceeds the consumption of the whole, he throws his scheme out of its equilibrium, and his theory must explode.

Now, the bare statement of this theory shows its utter absurdity, setting aside the violation of every sound principle of political economy which it involves, and the contradiction of the testimony afforded by the experience of all civilized nations. There is not a nation in the world in which some great interest does not predominate, and produce more of its peculiar commodities than can be consumed by its own people; and hence *it must* seek a market abroad for this surplus, or it must suffer it to perish upon its hands; and thus the labor spent in producing it becomes an utter loss. And it is upon this great and interesting fact that commerce among nations is founded. Commerce is but the exchange of the surplus products of the labor of one nation for the surplus products of the labor of other nations. Thus, in theory, the scheme of Mr. Skinner, if it were possible to carry it out in practice, *would annihilate all commerce, and, as a necessary consequence, all civilization;* for nations will not mix with each other for courtesy merely. They must be impelled together by traffic. Such is the order of Providence; and the reason and the effort of feeble man cannot repeal it, nor successfully evade it.

So much for the philosophy of Mr. Skinner's theory. I will now test its utter absurdity and impossibility by facts, which neither he nor any one else can gainsay.

The greatest and most important interest in this country is the agricultural. It possesses a capital of at least $4,000,000,000, and probably produces at least $1,000,000,000 in value of products. Certain it is that it produces a large surplus of wheat, corn, cotton, tobacco, rice, and provisions, for exportation to foreign countries. It produces more wheat and corn than can be consumed at home, or for which a market can be found abroad. Of the grains, it produces from 30,000,000 to 40,000,000 of bushels more of wheat than can be consumed at home; and of corn, from 100,000,000 to 200,000,000. Now, Mr.

Skinner observes this fact. He thinks it very hard that the agriculturists should be compelled to employ merchants and sailors to send this surplus, or so much of it as may be wanted, abroad to find consumers. Nay, he finds that, ordinarily, not quite enough consumers can be found abroad to absorb this surplus. He looks about for a remedy, and he finds the manufacturing interest, which he represents under the figure of the loom, and the mining interest, which he impersonates in the form of the anvil, both employing much capital and many persons. And it occurs to his mind that the true remedy for the farmers and planters, whom he finds so oppressed with the bounties of Providence, is, to have Congress shut out from our markets, by legislation, the cloth and iron of other nations with which our farmers and planters have hitherto traded, thus rendering it impossible for them to purchase any of our grain; and thus, also, by rendering the business of agriculture *so poor*, and the manufacturing and mining business *so good*, as to compel a transfer of men and capital from the former to the two latter, until the products of the former are so diminished in amount that they will just equal the consumption of the whole nation. I will not stop here to consider its effect upon the manufacturing and mining interests of this transfer of men and capital, but will proceed at once to the statistics of those two interests.

By the last census, it appears that in 1840 the capital employed in the manufacture of cotton was, in round numbers, $51,000,000; value of cotton goods, $46,000,000; the number of operatives employed, 72,119. The capital invested in the woollen manufacture in 1840 was $16,000,000; value of products, $21,000,000; persons employed, 21,342. In iron-mining, the capital invested in 1840 was $21,000,000; number of tons of all kinds produced, 484,136; persons employed, 30,497.

Leonard, in his "Mechanics' Principia," estimates the amount of capital now invested in the cotton manufacture at $66,964,275; the number of spindles employed, 2,678,571; the quantity of cotton consumed, 400,000 bales, or 180,000,000 pounds; the number of yards produced, 720,000,000, or 36 yards to each individual of the population. And in "The Dry Goods Reporter," the organ of the manufacturing interest, published in New York, dated Dec. 9, 1848, and now before me, I find the following estimate, by the editor, of the capital, &c., now employed in the cotton interest, viz.: capital invested, $80,357,130; number of spindles, 3,012,500; number of operatives employed, 101,250; bales of cotton consumed, 480,000; yards of cloth produced, 756,000,000, or 37½ to each individual. This estimate may be too large, and for the purpose of my argument I will adopt the estimate of Leonard.

The amount of capital now invested in the woollen manufacture is $30,000,000, as estimated by Samuel Lawrence, Esq., of Lowell, one of the most intelligent manufacturers in the Union. The value of manufactured goods, persons employed, &c., probably bear very near the same ratio to the capital as in 1840.

The iron interest, particularly in Pennsylvania, has made still greater strides. In 1840, the capital employed in iron mining in the whole Union was $20,190,758; quantity produced in tons, 484,136; persons employed, 30,497. In Pennsylvania, the amount of capital invested was $7,781,471; quantity of all kinds of iron produced, 185,639 tons; persons employed, 11,522. In 1847, according to Mr. Childs, the able Editor of "The Philadelphia Commercial List," as quoted in "The Merchants' Magazine," vol. 16, pages 525–527, the capital invested in Pennsylvania was $20,190,758; number of persons employed, not stated; number of tons produced was 368,056, the value of which was $23,923,640. Thus, in 1847, did the iron interest in Pennsylvania nearly equal in amount of capital, &c., that interest in the whole Union in 1840. The capital invested in the whole Union in the manufacture of iron in 1848 is probably about $40,000,000.

Omitting much of detail, which will too greatly encumber my article, I come now to the present value of the manufactures and products of these three interests.

Assuming, according to Leonard's estimate, the capital invested in the cotton manufacture to be $67,000,000, the value produced, bearing the same proportion to the capital as in 1840, would be not far from $57,500,000. The value of cotton goods imported in 1847, after deducting the amount exported, was $11,210,348; thus showing that the production of cotton goods in this country falls about one-fifth short of the consumption; and therefore the manufacture of cotton must be increased in that proportion to equal the consumption.

As before stated, the capital now invested in the woollen manufacture is $30,000,000. Estimating the production in the same ratio to the capital as in 1840, it will amount to $40,000,000. The value of woollen goods imported in 1847, was $10,665,875; thus showing that, in order to equal the consumption, the capital and production of this branch of manufactures will only have to be increased one-fifth.

The quantity of iron now produced annually in the United States is, probably, about 800,000 tons; worth $40,000,000. The quantity imported in 1847 was 85,344 tons, at a cost of $3,581,514. In 1845, the last year of the tariff of 1842, the quantity was 102,721 tons, valued at $3,189,936. It appears, then, that in order to supply the consumption of the country, it will be necessary to increase the production of iron not quite one-eighth of the present quantity produced.

Increasing the number of operatives, or laborers, in all these three interests, in the same ratio of the capital invested, as in 1840, let us see how much more of the products of the plough these interests will demand. As it is not necessary to be precise in order to illustrate the absurdity of Mr. Skinner's scheme, I will assume the present number of operatives in the cotton manufacture at 100,000, or 28,000 more than were employed in 1840; in the woollen interest 50,000, or 18,700 more than was employed in 1840; in the iron interest 50,500, or 20,000 more than was employed in 1840—making, in the aggregate, 66,700 more operatives and laborers than were employed in these three interests in 1840. Yet, as the production at present in all those interests—two of them at least—falls short of the consumption about one-fifth, it will be necessary to add 40,000 more operatives and laborers to the number, and then we shall have a sufficient force, with the corresponding increase of machinery, to manufacture just cloth and iron enough for the consumption of the whole country.

In England, it is estimated that there are three and a half persons dependent on each person engaged in manufactures. But, to be liberal, I will suppose that these 40,000 persons to be added to the manufacturing and mining interests, bring with them four dependent persons, or 160,000; making in all 200,000 persons abstracted from the agricultural interest, who, instead of being producers, become the consumers of the products of that interest. Will they be sufficient to consume the surplus grain of the agriculturists, saying nothing of the cotton, &c.?

Let us see. In England and France, from five to seven bushels of wheat are allowed for the consumption of each person per annum. But, to make my calculation most favorable to Mr. Skinner's theory, I will allow 10 bushels of wheat and 10 of corn, which is twice as much as can be eaten by one person; making, in the whole, 2,000,000 bushels of wheat and the same amount of corn which they will consume of the products of the farmer. Thus, after equalling the supply of manufactures and iron to the demand, the farmers have still some 30,000,000 bushels of wheat and 100,000,000 of corn for which to provide a market. Now, what shall be done?

In order to supply this market, will Mr. Skinner go on transferring men and capital from the farming to the manufacturing and mining interests? If he should do so, he would compel his manufacturers and iron-masters to exceed the demands of the plough interest, and compel *them* to go abroad in search of a market for their fabrics and iron bars.

The whole immense cotton manufacture of England employs only about 377,000 operatives, with 1,900,000 dependents, including themselves; and the value of cotton goods annually exported by England to other countries is about $112,000,000. The woollen and iron interests do not employ half of that number of persons. And yet, *if the whole cotton, woollen, and iron interests of England were transported to this country, they could not consume the surplus grain and provisions produced by the American farmers.*

But, according to his theory, Mr. Skinner is bound to balance the production and consumption of all these interests, and all other interests. He is bound to so increase the manufacturing and iron interests as will enable them to consume all the surplus products of the farmer, and, at the same time, save them from the necessity of going abroad for a market for their surplus fabrics and commodities. This I have shown to be an utter impossibility—a mere chimera of the brain—a most palpable absurdity.

But, according to his theory, nobody is to be compelled to go abroad in order to exchange the surplus products of his labor with the foreigner for the products of the labor of the latter. Now, what will he do with the cotton planter, to say nothing of the rice and tobacco planters? The cotton planter produces 1,000,000,000 pounds of cotton each year, of which the American manufacturer consumes but 180,000,000 pounds, compelling him to seek a market in foreign countries for the other 720,000,000 pounds. Ought not Mr. Skinner's plan to remedy this? Let us see how much he must increase the capital, and the number of operatives of the loom, in order to do it. Without going into details, my calculations require a capital of $372,600,000; value produced, at least $350,000,000; about 14,500,000 spindles; 526,000 operatives, with about 2,600,000 dependents, including themselves, who would consume only 26,000,000 bushels of wheat, still leaving a surplus in the hands of the farmer, supposing the surplus to be great as now. It would

produce 4,000,000,000 yards, and clothe 100,000,000 of people, allowing 40 yards to each person. What, then, would become of the poor manufacturers? Why, they would have to seek a market for their surplus productions in every land and clime, and among people of every race, color, and name.

In these calculations, I have supposed the agricultural interest to remain stationary. That, however, would not be the fact. It would continue to increase; and with the immense facilities in this country, it will for many generations yet to come far outstrip all possible increase of the manufacturing interests. The process of checking the productions of the plough, which Mr. Skinner would have Congress adopt, is idle and preposterous. The transfer of every million of capital from agriculture to manufactures, would take with it but about eight thousand persons able to be producers. And, as but about $20,000,000 capital are wanted to equal the supply of manufactured fabrics to the demand, it would be but a drop from the bucket. It would hardly exert a sensible effect upon the interests of agriculture. Mr. Skinner forgets that the great business of manufacture *is done by machinery*. It is the steam-engine, the power-loom, and the spinning-jenny, that perform nearly all the work in the business of manufacture. A few men and women comparatively are required to look on and watch them. And in this fact will that worthy and respectable gentleman find an insuperable obstacle to his plausible but shallow scheme.

But I will not pursue the subject further, although I have an impregnable array of facts to bear upon it. The truth is, Mr. Skinner's scheme, when analyzed and stripped of its typical meaning and reduced to mere matter of fact, is the most absurd and grotesque that was ever proposed by any man in a sane state of mind. It involves not only a violation of all sound maxims of political economy, but it boldly contravenes the laws and the intentions of Providence, who has decreed that one nation shall produce a surplus of products peculiar to its climate, soil, and habits, to sell to other nations;—in short, *that nation shall trade with nation and be civilized.* Labor, which was ordained by God, is the parent of commerce; and commerce, next to the Christian religion, is the great agent of civilization.

Since Mr. Skinner has made his publication the mere vehicle of arguments in favor of a protective tariff, and so far political, he cannot expect that it will be countenanced and sustained by the great body of agriculturists who differ from him in opinion. He will more appropriately look, as he doubtless does, to the manufacturers and iron-masters for support.

COMMON SENSE.

The writer of this article has evidently been disposed to make himself merry at our expense. He thinks the doctrine that the loom and the anvil should take their places by the side of the plough and the harrow, carries "absurdity" on its face, and he proves its "impossibility" by facts that neither we "nor any one else can gainsay." There is, however, an old proverb that says "those who win may laugh," and to which we would beg to call his attention. We will examine his "facts," and having done so, will be disposed to permit himself to determine which is the winning side.

The great object we would attain, in his view, is that of rendering the business of agriculture so POOR, and the manufacturing and mining business so GOOD, as to compel a transfer of men and capital from the former to the latter, and such must, he thinks, be the uniform and constant result of protection to the farmer and planter in their efforts to seduce the consumers of food and converters of cotton and wool to come and take their places by their side. If this be so, it must produce impoverishment of the nation, while it enriches only "a few lordly proprietors." If it be so, it must produce a diminished power to consume cloth and iron, for it is obvious that no increase in the consumption of these few "lordly proprietors" can make amends for a diminution in that of the people at large. How far this was the result of the tariff of 1842, we may now gather from his own facts, which we shall not pretend to "gainsay."

The value of cotton goods produced in 1840, as given by him, is stated at $46,000,000. That of 1847 at $57,500,000. This, however, is but one way of stating facts, and the very one that shuts out of view the advantage derived from the domestic production of these goods, viz.: the reduction

of cost, and increased facility of purchase by the consumer. The quantity of cotton consumed in 1840, was under 300,000 bales. In 1847, it rose to 607,000 bales, being more than double the quantity, while the population had grown only 25 per cent. Of this increase, nearly the whole had taken place subsequently to the passage of the tariff of 1842, which found half the cotton mills in the country in a state of ruin, because of the diminished power to consume cloth, consequent upon the free trade system of 1840–1841. Three-fourths of the people of the Union are agriculturists. Now, if the tariff of 1842 had tended to render them "so poor," how is it that they were enabled to consume so much cloth? If the free trade system of 1840 and 1841 had rendered them "so rich," how was it that they could consume so very little of either domestic or foreign cloth as they did in 1842?

The value of woollen manufactures produced in 1840 is given at $21,000,000. That of 1847 at $40,000,000. Here is an admission that the power of consumption had doubled, and it is short of the truth. It is well known that the whole increase in production took place subsequent to 1842, during which period the population had not increased twenty per cent. Now, if the protective system rendered the people "so poor," how is it that they were enabled to consume so much, and why was it that they consumed so little under the free trade system in 1842?

The iron produced in 1840 is stated at 484,000 tons. In 1842 it had fallen far below 400,000 tons, for half the furnaces of the Union were closed. In 1847 it had risen, as is here stated, to 800,000 tons. The power of consumption had more than doubled in five years, under a system that, according to this semi-official statement of the views of the late occupant of the Treasury, tended to render the great mass of the people "so poor" that they would be compelled to seek employment in manufacturing or mining, to obtain even the necessaries of life. We pray our friend "Common Sense" to enlighten us on this point, for it is one of great interest. We should be glad would he inform us why it was that the power of consumption under the free trade system fell so low that nearly all the mills and furnaces of the Union were closed, and that the farmers cut the throats of half their sheep; and why it was that under the ruinous protective system, described by the Secretary as "a war upon labor and capital," the power of consumption grew so rapidly that the people were enabled to purchase twice as much cloth and iron, per head, in 1847, as they could do in 1842? Here are his own "facts," that we do not pretend to "gainsay." All that we desire is that he shall account for them in accordance with his theory.

To bring the home production of cottons, woollens, and iron, up to the present consumption, would, in accordance with the "facts" here given, require that we increased the first two by one-fifth, and the last by one-eighth, requiring 40,000 laborers, and allowing each to have four dependents, we should thus obtain 200,000 persons, whose demand for "the products of the farmer" would be 2,000,000 bushels of wheat, and as much of corn, and this, the writer thinks, is putting every thing in "the most favorable light" for our theory. That done, the farmers will "have still some 30,000,000 of bushels of wheat, and 100,000,000 of bushels of corn for which to provide a market." "What now shall be done?" says "Common Sense." We will tell him. Forget his theory, and try to obtain a little practical knowledge.

A similar calculator, writing in the summer of 1842, would have said, the number of operatives employed in the cotton manufacture is 72,000; in that of woollens, 30,000; and in that of iron, 30,000, making a total of 132,000. We import now one-fourth of our cloth and iron. If we make it all at home, it will require 33,000 additional operatives, and allowing each of them to

have four dependents, the result will be that there will be made a market for "the products of the farmer" to the extent of 165,000 mouths, requiring 3,300,000 bushels, and that in the endeavor to obtain this miserable substitute he will sacrifice his connection with "the great grain markets of the world."

Let us now see what are the "facts." The consumption of cotton and woollen cloth, and iron, in 1847, was twice as much per head as in 1842, and the amount cannot have been short of 250,000,000 if not 300,000,000 of dollars. Taking the former amount, we have an additional consumption of 125,000,000. Let us now see what it was that was consumed. The farmer fed the men who mined the coal and ore, those who converted the ore into iron, and those again who converted the iron into bars, and axes, and spades, and hoes, and ploughs. He fed the men who built the mills and furnaces, and the houses for the workmen, and those who made the machinery. He fed the men and women, and children, who converted the cotton and the wool into cloth. He furnished the cotton and the wool to make the cloth. He furnished the stone and the timber with which the mills were built. The land and its owner furnished EVERY THING towards the production of these $125,000,000, and thus was made a market on the land for the products of the land, enabling the farmer to return to the great machine the refuse of its products, and to increase its production, with constantly increasing power to consume the necessaries, conveniences, and luxuries of life, while accumulating with increased rapidity the machinery necessary for a future further increase of production. Here are the "facts" presented to our view on a retrospect of the past. Can "Common Sense" "gainsay" them? If not, can he make them square with his theory?

Following out the theory that each person engaged in mining or manufactures, or dependent upon persons so engaged, is a customer to the farmer to the extent of only 20 bushels, we are told, and that in a manner the most emphatic, that "if the whole cotton, and woollen, and iron interests of England were transported to this country, they could not consume the surplus grain and provisions produced by the American farmers." This is certainly a strange assertion, coming as it does from a man that insists upon our looking to England for a market for our great and constantly increasing surplus! We will not imitate him in calling it "a chimera of the brain —a most palpable absurdity," because we believe that such words are used only in the absence of the reasoning power, but will leave its author to decide upon its claims for consideration after it shall have been examined.

The export of Great Britain may be taken at about 50,000,000 of pounds sterling, consisting almost entirely of cotton, woollens, and iron. The home consumption is far greater than the export, but to avoid the possibility of having our assertions challenged, we will put the whole product of cottons, woollens, and iron, at 100,000,000 of pounds sterling, or $480,000,000. Deducting the cotton and the wool that are imported, we may put it at $400,000,000, but we should be safe in placing it far higher, and all this consists of the products of the earth, and mainly of food, yet the transfer of all these vast interests, as we are told, would not be sufficient to find consumers for our vast surplus! If this be true, how is it that we do now dispose of it? Our export to all the world is not one-twentieth of what is consumed in England by these three great interests, and yet a small extra demand, like that of 1847, empties our granaries!

The farmers of England pay a rent of $100,000,000, and they and those whom they employ must expend far more in the purchase of sugar, tea, and other important articles of food, of clothing, furniture, and machinery of production, and for all this they must sell the products of the earth—food

and the materials of clothing—to be consumed by those who are not engaged in the work of cultivation. In addition, England imports thirty or forty millions of dollars' worth of food from Ireland—and much from Scotland, Canada, the United States, Poland, Russia, and even India. All this is to be consumed by those who are not engaged in the work of cultivation, the men who *convert* the products of the earth, and those who are engaged in the business of *exchanging* them. The converters are at least four times as numerous as the exchangers, and must consume in that proportion this vast amount of the products of the earth. These converters are the men who make cotton and woollen cloth, and iron—those who constitute the three great interests whose powers of consumption "Common Sense" would have us so much despise.

Admitting it, however, to be a "fact" not to be "gainsaid," that if our farmers could have the supplying the whole of these millions of men, and women, and children, employed in producing the cloth and iron of England, we should still have a surplus, is it not absurd to be perpetually straining for a chance of feeding a very minute portion of them, and that in competition with the serfs of Russia and the wretched people of Sicily, who must sell at any price, having made no market on the land for its products, and who now obtain in the market of Liverpool but one dollar per bushel of 60 pounds, a large portion of which is swallowed up in the cost of transportation from the farm to the port of shipment, from that port to Liverpool, and in commissions to the hosts of men in the various towns and cities, who live upon the spoils of the unfortunate producer? If our surplus is really so great, is it not obvious that we have too many producers and too few consumers? Would not "common sense" teach us that the system which enables men to remain at home to be customers to the farmer, instead of flying to the West, there to become his rivals, is the one which would most advance the agricultural interest? Really, it is time that men who undertake to teach the world in regard to these great questions, should commence with some little—even if it be a very little—practical knowledge.

It is insisted, however, that "nation must trade with nation," to become "civilized." We might reply by pointing to Ireland. Her poor potato-growers trade off their whole product, except the wretched thing called *the lumper*—which is preferred because not easily digested—but we do not see that they become more civilized. They do not even keep the pig, but the more they trade the poorer and more miserable they become. Where is the civilization of India?—of Portugal?—of the West Indies? Has commerce—that which is facetiously called free trade—given them civilization? Does Canada advance in civilization? New Brunswick has perfect freedom of trade, yet every vessel that comes thence is crowded with passengers who flee from it as if from pestilence, *to seek protection*, even that which is afforded by the tariff of 1846.* Nova Scotia has perfect freedom of trade,

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* *Canadian Emigration to the States.*—The Western journals inform us that numbers of Canadians who have been warmly in favor of the annexation of Canada to the Union, are taking passage on board of steamboats, with all their property and families, for Wisconsin and other States. The St. John (N. B.) News speaks to the same effect, of emigration from New Brunswick, and it is apprehended by the Provincial papers, that unless something be done, the provinces will become comparatively deserted in less than twelve months.—*North American.*

Distress.—Accounts of distress and destitution reach us from all parts of the country. We have heard the names of several parties mentioned, who, to save their children from starvation, were compelled to kill their domestic animals, and many families have been subsisting for some time on the fish they catch in the rivers. The principal cause of this distress has been the repeated failures in the wheat and potato crops; and as there has

yet men starve to death surrounded by fertile land, and coal and ore,—that should make them rich. Can "Common Sense" explain all these things in accordance with his theory?

Of all the countries of Continental Europe, there is none so prosperous as Belgium. Around her, everywhere, are wars and bloodshed, revolution, poverty, wretchedness, and death. She alone is so quiet that, month after month, her name is unmentioned in the newspapers. Her population increases rapidly, and yet she sends us none of it. Why is it so? Is it not because she has protected the farmer in his efforts to draw the consumer to his side, and enabled him to convert sandy wastes into cultivated farms of the highest fertility? Is it not that she has thereby enabled man to trade freely with his neighbor man? It is so, and in thus doing she favors the advance of civilization far more than do those who insist that "nation shall trade with nation," advocating a policy that compels men to fly from their fellow men, abandoning the vicinity of rich lands, uncleared and undrained, to seek the West, there to commence the work of cultivation on poor ones, as is the case to so great an extent with the people of Virginia and South Carolina.

It is not, however, true, that protection diminishes the power to *maintain* commerce. The trade of unprotected Ireland, and Canada, and New Brunswick, and the West Indies, and India, is diminishing, because the system has tended to the exhaustion of the land and the people. That of the Union did so in 1840, 1841, and 1842, for the same reason. With protection, foreign commerce grew, and with it it will continue to grow, because men who are enabled to combine their exertions produce largely, and the power of consumption grows with that of production.

We have, however, given to this "masterly view of the question" more consideration than it merited, and will now close. It came before the world preceded by a flourish of official trumpets, and therefore alone it is that we have given it any. In conclusion, we would suggest to its author that if he would study what it is that "common sense" prompts men most to desire, he will find that it is the power of associating with their fellow men. If, then, he will study his own system, he will find that it tends to compel men to separate from each other, and thus to do precisely that which "common sense" would teach them to avoid. To the editor of "The Union" we would suggest that as we have given place to his attack upon us, he should imitate our example, and enable his readers, too, to "hear both sides."

Drum-head Cabbage.—Mr. Fuller, M. P. informed the Council that he had for the last two years grown the drum-head cabbage from seed obtained by him from Messrs. Thomas Gibbs & Co., the Seedsmen to the Society. His bailiff had last year a very fine crop of forty tons per acre of this plant, which he thinks a very valuable one, and economical in its cultivation. He gives these cabbages to the cows, calves, and ewes, as well as to the lambs of last year, and finds all do well on them. The land on which they were sown was very poor land, covered with heath and furze, but which, by well draining and subsoiling, had produced very excellent turnips, carrots, and the drum-head cabbages now referred to; while on a part of it last year was grown the finest crop of peas in that part of Sussex, subsequently damaged, however, before carrying, by the wetness of the autumn.—*English Paper.*

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been but little employment during the winter, the inhabitants in the rural districts have been thrown for support on the produce of their farms, which they had considered but of little consequence whether they were tilled or not.—*Miramichi (Canada) Gleaner.*

These poor people have no manufactures, and therefore they are unable to consume on the land the products of the land, which becomes at last exhausted, and that is followed by the exhaustion and death of its owner.

THE COMMISSIONER OF PATENTS.

Washington, April 12, 1849

MESSRS. J. S. SKINNER & SON—GENTLEMEN:—In your prefatory remarks to a table headed "Agricultural Statistics," published in "The Plough, the Loom, and the Anvil" for April, instant, I find the following:—

"True it is, that some of our readers who may happen to be so favored by their Representatives in Congress as to receive the Report of the Commissioner of Patents, may get many tables like this, which serve to make up those Reports; but if they chance should, they will probably receive along with them, AS HERETOFORE, *an exhortation to submit themselves to the low wages and the low living* that may enable them to compete in the grain markets of the world with the produce of the slave and the pauper labor of Europe."

The character given, in the paragraph above quoted, to the Reports of the Patent Office since I have been Commissioner, is an utter misrepresentation. Not a report of mine contains a single "exhortation," expressed or implied, to the farmers of this country to submit themselves to "the low wages and the low living," to enable them to compete with "the slave and the pauper labor," of Europe. And how you could have fallen into so gross an error with regard to the Reports of the Patent Office I cannot imagine, unless you have a disposition to judge of the character of those Reports without first availing yourselves of a knowledge of their contents.

I should not indulge in this strain of remark, if I had not before observed a disposition on your part to misrepresent in your journal the true character of the Patent Office Reports.

Whatever may be my individual views with regard to the subject of free trade, or protection, I have, in my Official Reports, carefully and scrupulously avoided any expression or argument in favor of one or the other. I have given facts only in relation to the great industrial interests of the country, from which all can draw conclusions; and from which conclusions have been drawn in favor of both theories, by their respective advocates.

This assertion, I am confident, the most rigid and scrutinizing examination of my reports of which you are capable, will not enable you to gainsay. I therefore call upon you, as an act of justice, to publish this letter in "The Plough, the Loom, and the Anvil," in order that its readers may see that your statements with regard to the character of the Patent Office Reports, are wholly groundless and erroneous.

I am, respectfully, your obedient servant, EDMUND BURKE.

To the Hon. Edmund Burke, Commissioner of Patents, Washington.

SIR:—Your communication of April 12, was received on the return of the Senior Editor to this place, to arrange the matter for the June number of "The Plough, the Loom, and the Anvil." The whole of the *May* number, as you will perceive by the enclosed last page of it, was then already in type, compelling us to postpone the publication of your letter until June; and leaving nothing to be done to meet your wishes for the present, except to put forth on the cover of the May number, the statement, of which we herewith send a copy. In the haste of sending them to the printer, the introduction to the tables was not properly worded, as we shall admit, but we utterly disclaim the "disposition" you have allowed yourself to impute to us, to misrepresent your Reports, in which we have found, from time to time, many statistical facts of much importance to every political inquirer. Yet we are far from agreeing with you "in the conclusion that the American grain growers can deliver grain or flour at as low a price in England as the

grain growers of any other country, not excepting Russia on the Black Sea; and that they have it in their power to command the great grain market of Great Britain, and of nearly all the corn-importing countries of the world." This you believe the grain growers of the United States can do, and therefore it may be implied you would exhort or advise them to attempt it; while we believe they cannot, without, in our judgment, (as we should have stated,) submitting themselves to the low wages and low living of the serfs with whom you think they may successfully contend—nor do we think they could even then. Our opinion is, that it were better not thus to lead the American grain grower to depend on the great grain market of Great Britain, but to prompt him rather to the cultivation of the more reliable home-market, by bringing to the side of the American agriculturist the consumers of that immense amount of agricultural produce now imported into the United States from England, and through her from Russia on the Black Sea, in the form of British manufactures. Your opinions, to the contrary, are as honestly entertained as ours, and may be more correct; but, for ourselves, we would ask with General Jackson, in his letter to Dr. Coleman: "Where has the American farmer a market for his surplus product? Except for cotton, he has neither a foreign nor a home market. Does not this clearly prove, where there is neither a market at home nor abroad, that there is too much labor employed in agriculture, and that the channels for labor should be multiplied? Common sense points out at once the remedy—Draw from agriculture this superabundant labor, employ it in mechanism and manufactures, thereby creating a home market for your breadstuffs, and distributing labor to the most profitable account, and benefits to the country will result. Take from agriculture in the United States, six hundred thousand men, women, and children, and you will at once give a home market for more breadstuffs than all Europe now furnishes. In short, sir, we have been too long subject to the *policy of the British merchants*. It is time that we should become a little more *Americanized;* and instead of feeding the paupers and laborers of England, feed our own, or else, in a short time, by continuing our present policy, we shall all be rendered paupers ourselves."

After all, sir, it is a question for the American people to decide; and in our humble sphere we are endeavoring to persuade them to regard it not as a *party*, but as a broad *national* question; and this free discussion and the force of truth seem to have already in a great degree accomplished, as is seen in the fact that even the tariff of 1846 is asserted by its friends to be a designedly protective one, leaving it now to be decided as a question of amount and not of principle—and on this surely men may judge for themselves, without the aid of mere partisans.

Not doubting that we are all equally aiming at what we suppose to be best for our country, and assuring you of our readiness to correct any misapprehension or misrepresentation of your views, we remain,

Respectfully yours, J. S. Skinner & Son.

Portable Railway.—Dr. Spurgin favored the Council with the inspection of a model for a rotary railway, on the principle of the simple roller, for use in farms, docks, warehouses, and other places where heavy weights were to be conveyed short distances without the aid of horse-power; as manure from yards, corn from stack-yards, timber from woods, turnips or mangold-wurtzel from flat heavy land. He considered that this mode of conveying would prove fully efficient in its action; combining great simplicity with ready adaptability for the purposes required, at a cost not exceeding £10.—*English Paper.*

HIDE TRADE OF THE WEST.

"A LOT of one thousand green hides was received at St. Louis on the 4th instant, from Alton, to be shipped direct for the Eastern cities. The Republican says:—'A large business is now being done in the articles of dry flint and green salted hides, and St. Louis bids fair to become the greatest market for this article of any city in the Union. Already she exports more than any city in the West.'"

The people of the West raise oxen on lands that are surrounded by timber, and where bark should be cheap. Instead of tanning the hides themselves, they send it East, to places where bark is dear, and receive pay in shoes, and saddles, and harness, produced by aid of bark that has travelled hundreds of miles to seek the tan-yard. Could they once adopt, definitively, the policy that tends to bring the loom and the anvil to their sides, the tannery and the shoe factory would speedily follow, and they would have cheap shoes and saddles, as well as cheap cloth and iron. If evidence of this be desired, it may be found in the following paragraph which we take from one of our exchange papers:—

"A new enterprise, similar to the Variety Works at Columbus, Ga., is about to be established in our city. Our fellow-citizen, Mr. John Glendenning, in conjunction with Mr. Lockhart, of Lincoln county, has taken steps to put up a building near the site of the Old Planters' Hotel, where every variety of wood-ware, such as barrels, casks, kegs, pails, tubs, and buckets, is to be manufactured on a large scale. The steam-engine to be used is already here, and the building—a large three story brick building—contracted for. In a few months this manufactory will be under way, and probably in full operation.

"In connection with the wooden ware factory will be machinery for cutting and polishing marble—a branch of business in which Mr. Glendenning is already profitably engaged. We hope in time to see Georgia marble freely used in this Georgia factory, for various objects of use and ornament."—*Augusta Sentinel.*

Of all the States of the South, Georgia is the one that progresses most rapidly, because of all she has most endeavored to bring the spindle and the loom—the spinner and the weaver—to the side of the cotton and the food. With each step in this progress there arises an increased demand for shoes and saddles, for wooden ware, and for all other of the various commodities requiring hides and bark, and timber and food, for their production. The tanner and the shoemaker come, and they make a market for the products of the spinner and the weaver. They, in turn, help to make a market for the products of the bucket-maker, and all combine to give to the planter a market for his cotton and his food, enabling him to increase his consumption of shoes and saddles, buckets, cloth, and iron. Concentration makes the food come from the rich soils, and prevents the necessity for flying to the West, there to produce food or cotton from the poor ones, on which the work of cultivation must of necessity always begin, for want of capital to clear the rich ones.

Extraordinary Cotton Picking.—The N. O. Delta says, by a letter received from a friend at Tuscaloosa, Ala., we learn that on a plantation in Long Prairie, near the former place, the extraordinary amount of **3277** lbs. was picked in one day, (15th of October last.) by five field hands. However extraordinary the feat may appear, it is nevertheless true, as it comes to us so well authenticated that we have no reason to doubt its correctness. The following are the names of the slaves, with the amount of cotton picked by each:—T. R. McClintock's boy Sam, **712** lbs.; boy Bill, **667** lbs.; John Cockrel's boy Frank, **661** lbs.; F. Herndon's girl Violet, **665** lbs.; and W. H. Barmester's boy Peter, **572** lbs.; making in all **3277** lbs.

JOHN SINGLETON.

The April No. of "The Plough, the Loom, and the Anvil" contains an extract from a letter from the venerable man whose name is prefixed, with some very significant preliminary remarks of the Editor, which no one better knows how to employ, when he wishes to elicit information. The life of a man exclusively devoted to agricultural pursuits, presents but little to interest the general reader; but, nevertheless, one who has done so much for the advancement of that great interest, which occupies the time and labor of the great majority of the people of this country, merits respectful consideration, and to have his name rescued from the shade of oblivion.

This gentleman was born in Whitehaven, England, on the 28th of December, 1750, and received his elementary education at St. Bees. In April, 1766, he went to London, to his uncle, Thomas Dickinson, with whom he remained till May, 1767, when he took his departure for New York, and arrived in July of the same year. He then entered the counting-house of Henry White, with whom he remained till the last of June, 1770, when, upon the invitation of his maternal uncle, James Dickinson, he came to Maryland, and arrived in Talbot County on the 1st of July, 1770. It appears that in 1772 he made a voyage to Madeira, for the benefit of his health, and on his return entered into partnership with Andrew Main, and settled at Dover. This partnership was of a mixed character—mercantile and agricultural—but of short duration: for in 1773 he returned to his uncle, and lived with him. The following year he was married, (1774,) and managed his uncle's affairs, who was an old and childless man. In 1776 he settled at East Otwell, one of the farms of the aforesaid uncle, where he remained exclusively devoted to agricultural pursuits till the day of his death, which occurred on the 15th of March, 1819. It is a fortunate circumstance for the Eastern Shore of Maryland, that the destination of this gentleman was changed from that of a merchant to a farmer. The burning of Mr. Singleton's residence, some years ago, posterior, however, to his death, occasioned the loss of many records. Upon the death of Mr. Dickinson, the nephew became his sole heir, and, perhaps, the fine herd of cattle which the latter had, may be justly attributed to an importation of some half dozen cows, which was made very shortly before the death of the uncle.

Perhaps no man was ever more enthusiastically devoted to agricultural pursuits than the subject of this memoir. No matter what he undertook, his energy and perseverance were indomitable. He was for a large portion of his life a keen sportsman, the best shot at ducks in the country, but was never fond of the sports of the field. Mr. Singleton's landed estate was neither large nor particularly valuable—certainly inferior to other lands in his vicinity. It consisted of two farms, not adjoining, containing some nine hundred acres. It is conceded that he was the first great improver of land in Maryland: how fortunate, therefore, that his destination was changed!

The writer of this imperfect sketch well knows that he was the first man who ever covered a field with manure in this section of country: not a patch—not a lot—but one hundred acres of land. This was done for years, before others waked up, and saw the necessity and advantage of the operation. The country had been impoverished by the cultivation of tobacco; the little manure made had been exclusively applied to that crop. But little light was shed on agriculture for years after his labors commenced, and not much at the close; but of that little he availed himself. When his first experiments were made with marl, and for some years thereafter, he was literally laughed at by many—supposing that nothing could improve land that had not the odor of the farm-yard or stable. The value of calcareous

manures was neither known nor appreciated, and like the introduction of gypsum into Pennsylvania—it was by little and little. It may be safely affirmed, that but for the discovery and application of marl, this section of country would have been depopulated—many thought of moving out to the rich lands of the West—of abandoning a country abounding in calcareous manures, and possessing natural canals, where the waters themselves furnished large means for subsistence, and many of the luxuries of life. The means of renovation were present on a large portion of the lands, and this great pioneer of agriculture had demonstrated successfully the mode of application, and the unfailing result. There is now not one cultivator in these parts, even the most ignorant, who does not know the value of calcareous manures—and that it is literally a *sine qua non*.

The baysider of Talbot, who has no marl, catches the oysters off the bars, and converts the shells into lime, by burning them in kilns; and they who live removed from salt water, and possess not this resource, purchase stone-lime, which is delivered from vessels up the creeks and tributaries of the Bay—and then in many cases hauled for miles to the place of deposit.

Mr. Singleton was an experimental farmer. Science had done but little to enlighten his path; and his untiring industry led him to embark in many trials, unthought-of and untouched by others, for the advancement of agriculture. He was asked by a neighbor, above thirty years ago, if he did not intend to get some Lawler wheat for seed, because it was regarded as proof against the "fly." He replied in the negative—"You young men may try it: I want faith." He then proceeded to state that many years before, when the ravages of the fly were at their maximum height, he had procured twelve different varieties of wheat, and among the number, one had a solid stem: they were all seeded in adjacent rows, and under like circumstances, and *were all affected!* He gave it as his opinion, that no variety of wheat was exempt from the ravages of the "Hessian;" and it may be well questioned whether any of the present day ever made more experiments as to the different kinds, time of seeding, mode of preparation, and every thing calculated to avert this dread evil, which so often blasts the hopes of the husbandman.

Man is made, by the situation in which he is placed; and he who makes a discovery, and successfully carries it into practice, not only benefiting himself, but the community in which he resides, richly deserves to have his name handed down to posterity as a benefactor. If ever any individual, in the calm pursuits of private life, deserved a monument to be erected to his memory, John Singleton was the man. Much has been said latterly, of the importance of keeping farm accounts, and a statement of every operation performed on the farm. It is well known to the undersigned, that this gentleman kept a regular diary all his life, in which was recorded every thing that pertained to the farm—the number of loads hauled of every description—the times of seeding, quantity per acre, amount of product—the various experiments made, with all the details—and even the winds were noted, and all the changes of weather. Few men possess the patience, and energy, and industry, necessary to carry out such a system. Many of these diaries were saved from the conflagration, and give ample proof of the merits of the man. Perhaps the early initiation into the counting-house, and the few years spent therein, may have paved the way for such practice.

Chief Justice Tilghman, of Pennsylvania, cultivated his patrimonial lands in Maryland, till the day of his death. They were situated in Queen Anne's County, near the head of Chester River. Such were his official duties, that the venerable judge could only pay an annual visit. Having directed the clearing up of an extensive piece of meadow, a fine supply of marl was

discovered—hence his letter to Mr. Singleton, with whom he was acquainted, as to the mode of application, well knowing his ability to supply the desired information.

The reply to the various interrogatories was written under the most disadvantageous circumstances. It so happened that the undersigned went to his house a day or two after the aforesaid letter was despatched. He was so feeble from age and disease, and his hand so tremulous, that he could not write a line: he dictated the answer to the judge's interrogatories, and a young daughter committed it to paper. Most persons, under such circumstances, would have declined the task; and surely he had an ample excuse: but such was the character of the man, his disposition to be useful, and the remnant of that energy and perseverance which so eminently distinguished him, prompted the effort, doubtless among the last, of a life as pure as that of any man who ever lived.

It would be vain to attempt an account of his agricultural proceedings: the writer of this has seen, at an early age, his immense compost-heaps, for years before any such things were observed on any other farm; also his applications of marl: all men now know their value, and profit by his example. As to his mode of cultivation, it may be remarked, that after making fallows in every form, and after all the modes that ever have been suggested or practised, he came to the conclusion, some years before his death, and practised accordingly, that all the land intended for cultivation in any form, should be manured and ploughed in the spring—that what was designed for wheat, should be previously planted and cultivated in corn—alleging that no one crop of wheat, however prepared, was equal to a crop of corn and wheat on the same field—that the cultivation of corn was a good preparation for wheat—that summer fallows were injurious to land, filling it with filth, because most noxious weeds have then gone to seed, and are thereby multiplied in a ten-fold degree. His practice was to take the corn, stalk and all, off the field, and then seed the wheat, and *plough it in*. He was the first man who ever attempted and carried out this system; but it frequently caused the wheat seeding to be too late, and hence a diminution of the crop. But it gave him a great resource for manure, and whatever else might suffer, this was always uppermost with him. He also abandoned the reap-hook at a very early period, substituting the cradle for cutting wheat of such size as was only attempted by hooks. This perhaps led him to another expedient—the horse-rake, of which he was the inventor, for gathering the scattered wheat in the stubble; and he alone used it for years. It has since become the custom of all farmers in this section of the country, to employ this saving implement.

It may be remarked that this system was adapted to what may be called emphatically a grain-growing country, and where grazing does not constitute a part—except simply for the use of the farm. His mode of preparation was to flush the land for corn, and he was especially particular about the ploughing: the drag-harrow was then passed over, the land marked out lightly four feet each way, and three or four stalks left standing in the hill. The field was worked with harrows repeatedly, and just before harvest cross-ploughed; after harvest, one or two harrowings, according to circumstances. It may be added that he sowed clover on his wheat-fields, and used plaster, which had moderate action on his land. He also grew hemp for a time, and tried many things never attempted by others.

It would be useless to pursue a further account of his farming. Nothing has been stated which was not well known to or seen by the writer. It has now been thirty years since the death of this gentleman, and agriculture, like most other things, has made great advances in that interval; but much

yet remains to be done. We live in an age of progressive improvement, and perhaps, too, at the most eventful period of the world. Few men have descended to the grave more respected or more honored than the subject of this memoir, by all his friends and neighbors. He had not an enemy. His was a life of probity, and honor, and true piety. The cheerfulness of his temper, and his fondness for company, caused his habitation to be always full. If he had a fault, it was too much generosity.

The appeal made by the Editor of "The Plough, the Loom, and the Anvil," to rescue the name of such a man from oblivion, has prompted "A Nephew," to whom such significant allusion was made, to make the attempt: conscious, nevertheless, of his inability to discharge such a duty satisfactorily; but at the same time firmly believing that such has been his position, he has a better knowledge of the life, character, and farming operations of the deceased distinguished farmer, than any other man living. Another consideration also induces the attempt: that farmers generally will be glad to know something of one who has done so much for the advancement of agriculture, at an early period, as JOHN SINGLETON. Finally, it is proper to state, that the relation which subsisted between the subject of this article and the writer was that of marriage only—not blood.

A NEPHEW.

It might look like affectation, were we to attempt to say with how much pleasure the preceding memoir is registered in "The Plough, the Loom, and the Anvil;" yet who among the many that have honored our poor effusions by their perusal, for the last thirty years, might not be summoned to testify how earnestly we have endeavored to rouse, among the cultivators of the soil, that sense of self-respect and true discrimination, that would lead them to venerate and emulate such men as JOHN SINGLETON—men of unpretending virtue, and distinguished usefulness in private life,—far above those who may have gained higher eminence and greater eclat, in the tortuous paths of the politician, the more attractive pursuits of sordid avarice, or the more popular career of the military adventurer? Who does not know, that while such men may, like a choice old tree of the orchard, perish, and leave not a stump to mark where it stood, its seeds have yet been widely scattered, and its precious fruit be thus yet for ages enjoyed by a careless and forgetful posterity! Thus it is, that while all of us now know the value of calcareous, and the indispensable necessity for other manures, the importance of fine tilth, the economy of the scythe and the horse-rake, the expediency of removing the entire crop of corn preparatory to sowing grain, the advantages of farm registers, the superiority of drill husbandry, the utility of deep ploughing, the excellence of the centre-draught-plough, the perfection of improved animals, imported at great cost, &c.: yet who stops to dwell upon and do homage to the names of Tull, Ruffin, Singleton, Moore, Pennock, McCormic, Davis, Prouty, Powell, Clay, Sanders, Reybold, Van Rensellaer, Stephenson, Corning, Prentice, Vail, and a host of others, who, as pioneers, have gone ahead in the doubtful paths of experiment, *establishing* for our guidance by so much labor of mind and body, and so many costly trials, the labor-saving implements we are using—the noble animals we are breeding—and the precepts and processes we are following with so much confidence and profit? Thanks, then, say we, in the name of all farmers true to their profession, to the "*Nephew*" who has in this instance so promptly and so well answered to our call in their name, for a memoir of one of the noblest works of God—an honest man;—a memoir the more commendable and suitable for its very simplicity and exemption from all exaggeration and hyperbole of fact and of language, and so in admirable keeping with the unostentatious and useful life and character of its subject.—*Editors P. L. & A.*

The Belgian Government, to encourage the cultivation of the silk-worm, had, by a decree, offered to all who applied to the *Minister of the Interior* slips of mulberry trees and silk-worm eggs, and as a further encouragement, has offered a premium of one florin per kil. for cocoons of silk produced in the country, and, by an arrangement with the government, M. Mevuis, at Ucles, had undertaken to purchase, at the current price of the French markets, all the cocoons produced in Belgium.

THE CORN TRADE OF EUROPE.

From the Editors of "The Plough, the Loom, and the Anvil," to the Editor of "The Easton Gazette," Maryland.

SIR:—I send you for insertion in your paper—as yours is so exclusively a grain-growing region—an article, of which the printer has just sent us a proof, intended for a forthcoming number of "The Plough, the Loom, and the Anvil," on "*The Corn Trade of Europe.*" It will at once show how *agriculture*, which some would teach the farmer has nothing to do with legislation, is most intimately connected with it, and liable to be affected by the policy of our public men, and therefore a subject proper to be studied in that relation—not as a narrow question of petty party warfare, but as one that concerns the whole nation; until the question shall be permanently settled, how far we are to cultivate and depend upon a home-market, under our own control, or upon foreign markets over which we have no control, and in which we must meet as competitors the millions of serfs belonging to the nobles of Russia—laborers liable to be sold like sheep, with the land, and who live on what is called *pumpernicle*, a sort of hard, dry, black rye bread, that might harden the flesh and improve the wind of fox-hounds in the hunting season, but is not fit for free Christian men.

We are accused of perverting our journal—"The Plough, the Loom, and the Anvil,"—to *party purposes*. Nothing can be more untrue. I have established various periodicals, which have enjoyed eminent success and prosperity; but never yet have allowed *one line* to appear in them with any view to *party ends*.

The question at present, as to protection of American industry, is no longer a question of principle—*that* has been settled. The authors of the tariff of 1846, repealing that of 1842, avowed it to be an *efficient* measure of protection. The real question, then, is not one of principle, but merely of the proper *amount* of protection. Let any respectable farmer on the Eastern Shore of Maryland pull off for a moment his party spectacles, and read the accompanying article dispassionately, and say for himself whether it is safe to depend on the grain-market of England?—or is it not better, instead of importing millions of bushels of grain from Europe in the form of British manufactures, that we should force or entice the manufacturers to come with their skill and capital—their looms and their anvils—to eat our corn and wheat, and mutton and pork, and beef and potatoes, in our own country, alongside of our own ploughs? Does any one deny that General Jackson was "an up to the hub" democrat? Yet what said *he* on this very subject? Let gentlemen read what he said, and judge *for themselves*, instead of pinning their faith ignominiously on the sleeves of party hacks, of any faction, who use the people as so many stepping-stones to power and office. General Jackson, in his letter to Dr. Coleman, of North Carolina, on this very subject of drawing the loom and the anvil close to the plough in our own country, said: "In short, Sir, we have been *too long subject to the policy of the British merchants*—it is time that we should become *a little more Americanized*, and instead of feeding the paupers and laborers of England, feed our own." Now it is for endeavoring, not merely to *assert* but to *illustrate* by all sorts of facts and arguments, the very doctrine contained and more fully explained in General Jackson's letter, that *we* are charitably denounced as being sold to the American manufacturers, or it may be "to the Dutch." Well, suppose we were so sold, body and soul, how does that *answer our arguments*—our demonstrations? To impute sinister or corrupt motives, is not the way to refute an argument. While we despise the imputation of unworthy motives, we pity the man who, without the sense or the power to discover or expose our error, has not the manly independence to renounce his own. Our aim is, not to establish any foregone conclusion, but to arrive at the truth; and therefore we rather court than shun all gentlemanlike controversy with those who think us wrong; but how can any one controvert our principles successfully, without proving that General Jackson was wrong in his great fundamental policy? The fact is, that, in the present state of the country, this is *the* great question—whether we shall place the consumer by the side of the agriculturist, by making it the interest of both that he should go there, or whether we will keep him at a distance, wasting in the superfluous and unprofitable work of transportation and exchange, the time and labor that should be given to *productive* industry, and the improvement of our lands and ourselves. Rely on it, the PEOPLE, thinking for themselves, are fast coming to agree with General Jackson and General Taylor, that we should give "*encouragement and protection*" to American industry.

[From the London Mercantile Gazette, March 23.]

COMMERCIAL affairs remain in much the same position as last week—in no branch of trade has any marked improvement occurred; indeed, each day's experience tends to prove the baneful effects of free trade on the internal industry of the country. The value of all agricultural produce continues steadily to recede, and despondency and alarm on the part of the farmers increase. Moderately good qualities of English red wheat are not worth more than 40*s*. per quarter, a price which, with so small a yield as that of the last crop, is greatly below the cost of production. There is, however, no alternative but to sell; for, depressed as quotations now are, there is nothing to encourage farmers to hold. The spring shipments from the Baltic have still to come forward, and the continued decline in our markets has not hitherto stopped consignments from France, Holland, and Belgium. Our own impression is, that, whilst importations are permitted free of duty, 40*s*. per quarter for fine red wheat will always draw abundant supplies, except in cases of general scarcity, over a large portion of Europe. The best qualities of red Baltic, French, &c., are at present worth some 4*s*. to 5*s*. per quarter more than the figure named; hence we do not calculate on any immediate falling off in the arrivals from abroad. The weather has continued favorable for spring sowing, and all descriptions of out-door work are in a state of great forwardness. The reports from the rural districts, in regard to the appearance of the wheat plant, are likewise of a satisfactory nature, and, as far as the prospects for the next harvest are concerned, every thing promises well. At some of the agricultural markets, rather increased supplies have been brought forward this week, and so soon as the sowing of Lent corn shall have been brought to a close, we may calculate on larger deliveries from the growers than we have had of late. The arrivals of wheat coastwise into London have meanwhile been very small, and but little has been brought forward at Mark-lane by land-carriage samples from the neighboring counties. The show on Monday on the Essex and Suffolk stands, was trifling in the extreme, and from the more remote parts of the kingdom hardly any appeared; factors were consequently unwilling to accept less money, and though the demand was extremely slow, previous prices were about maintained. On Wednesday the stands were completely bare, and the attendance of buyers being at the same time very thin, the operations were altogether unimportant, and quotations remained nominally unaltered. This morning affairs continued in much the same position, and prices underwent no change. The arrivals of wheat from abroad have been on a very liberal scale, 31,440 quarters having come to hand during the week. Importers have shown a good deal of anxiety to realize, without incurring landing expenses; and whilst the value of English wheat has remained nearly stationary, that of foreign has undergone a further reduction of 1*s*. per quarter. Most of the business done on Monday was at that abatement, and since then the turn has, on the whole, been in favor of the purchaser. To-day, common Odessa was obtainable at 38*s*. to 39*s*., and good at 40*s*. to 42*s*. per quarter. The town millers put down the nominal top price of flour 2*s*. per sack, on Monday, which had more or less influence on the value of other sorts. The decline submitted to has, however, failed to impart more activity to the demand, and the sale has been slow throughout the week. Barley of home growth has come sparingly to hand, but having had good arrivals of foreign, the quantity brought forward has proved fully sufficient to satisfy the inquiry. The maltsters have for some time past conducted their operations with extreme caution, and the business has been principally in distilling and grinding sorts. Low qualities of foreign have been sold at 20*s*. to 22*s*., and the finer descriptions at 22*s*

to 25*s.* per quarter. Malt has hung heavily on hand, and its previous value has barely been supported. The arrivals of oats coastwise have been small, and from Ireland we are without supplies. A good many small cargoes of foreign having, however, come to hand, the dealers have been enabled to buy on quite as easy terms as before. The best heavy qualities, whether of home or foreign growth, have commanded former terms; but light and out-of-conditioned sorts have in some cases been forced off at a reduction of 6*d.* per quarter. This was more generally the case to-day than in the early part of the week. Beans and peas have not varied in value, but the demand for these articles and Indian corn has been languid in the extreme."

We give the above article in full, because we deem it highly important that the farmers should understand accurately the condition of "the great grain markets of the world," for which they are to contend with the serfs of Russia and the fellahs of Egypt. We need a market for our surplus food, and with a view to obtain it, abroad, we close mills and furnaces at home, filled with men who are consuming food, and thus force them to seek the West, there to become producers of food!

By the above it will be seen that the price of wheat fluctuated between 38*s.* and 42*s.* per quarter of 560 pounds, equal to 9⅓ bushels of 60 pounds each. This would give, in the market of London, *with freight and charges of all kinds paid*, about one dollar per bushel.* We ask the farmers now to look around and see to what extent the home consumption has been increased by the action of the tariff of 1842, and then to determine for themselves what would be the value of their labor and their land if all the persons who have, since the passage of that act, been employed in building and working mills and furnaces, had been compelled to turn their attention to agriculture, depending upon "the great grain markets of the world" for an outlet for their products? The resuscitating of the country from the state of distress that existed in 1841 and '42 was due to that act, and the sooner the whole people shall become convinced that such was the case, and determine to make protection a national and not a party measure, the more rapid will be the growth of the nation in numbers, and its advancement in civilization.

Oats.—The Chairman asked Mr. Houghton a question about the production of oats.

Mr. Houghton showed that an oat crop could take up a great quantity of acid from the soil. Without a knowledge of this point, very great blunders had been committed. He had himself made marvellous mistakes in not marking the composition of the soil, and the requirements of particular ground. He had farmed more bad land than any agriculturist in England, but he showed that it had lately been made very productive by analytical experiments. Mr. Houghton continued his dissertation by commenting on deep ploughing. He maintained that it was a mistake to plough land deep for a wheat crop, showing that the root must have firm ground, in order that the stem may be well supported.—*English Paper.*

To Purify Rancid Butter.—Melt it with a slow fire, in a well-glazed earthen vessel, to which put soft water, working them well together; and when it is cold, take away the curd and the whey at the bottom: do it a second and a third time in rose water, always working them very well together. The butter, thus clarified, will be of the sweetest delicious taste.

It was a whimsical threat of a raw-boned lusty fellow to a very little man with whom he had a dispute—"That if he did not hold his jaw, he would put him between two pieces of bread and butter, and eat him up like an anchovy."

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* For freight and charges, go back to page 684.

LIME, AND OTHER MANURES,

AND THEIR APPLICATION.

We have more than once intimated the reasons which prevail with us not to publish at length the numerous *agricultural addresses* which every year brings forth in various parts of the country, from all of which, if we had room, something might be found of an instructive and practical character. But as most of them have a local bearing, and as this journal has a general—not local—circulation, or, if any thing, is like its founder—more honored at a distance than at home; it would not be tolerated that we should undertake to publish all, and it would be invidious to discriminate. Hereafter, however, we shall give extracts from most of them, of such parts as appear to be most novel and of most general application—beginning now, under that rule of discrimination, with the *prize essays* elicited in Maryland, by the offer of liberal premiums by the worthy proprietor of "*The American Farmer.*"

Taking them in the order of merit, as assigned to them by the committee appointed for that purpose, we begin with that of Edward Stabler, of Montgomery County, Maryland, "on the *renovation of worn-out lands*," and surely no one can travel from Boston to Mobile, without perceiving that whatever is pertinent to that question, embraces a wide extent of country.

The essayist very wisely commences by recommending *thorough draining*, and says emphatically, "the writer has not known a case where this operation was performed with ordinary skill and judgment, that did not fully repay the expense; and in some cases the product was increased from five to ten fold."

But the difficulty here, as in many other cases, consists in want of capital to ditch and drain thoroughly; and rather than do it imperfectly, it had better not be undertaken. When our country gets thickly settled, under the effect of laws that tend to bring the loom and the anvil close to the plough, and thus provide consumers near to the producer, then will our rich swamps be cleared, our marshes drained, and the waste lands (more than half of Montgomery County) be improved, because then there will be demand, near at hand, for the *sort of products that will pay the cost of draining*. Turn as we may, look where we may, and blink or try to blink the subject as we may, there is, after all, no certain means or guaranty for general improvement of any sort, until the laws tend to bring into proximity the producer and the consumer in all the branches of productive industry, for which the materials exist in the country.

This subject of thorough draining is most thoroughly discussed in "Stephens's Book of the Farm," illustrated by more than fifty engravings, all of which was republished in the "Farmers' Library," and some of these days we will republish from the stereotype plates, in "The Plough, the Loom, and the Anvil," all that is there given.

Mr. Stabler next passes to the subject of *deep ploughing*, the philosophy and value of which is well explained; but as it would not be easy to throw any new light on this subject, and as it is probable that he who has not reflected upon and studied its importance, does not reflect upon or study any thing, and would not listen even to Thomas Moore himself, though he should rise from the dead, to teach him, we pass on to the following extract, of which it may be said that the importance of all that is new cannot be over-rated—and all that is not new is so important that it cannot be too often repeated.

We will now proceed to the third important step in the process of "renovating worn-out lands." The proper kind, and application of, manures: viz. stable manure, and vegetable matter produced by the farm; lime, marl, bones, ashes, guano, plaster, and turning in green crops.

It may be considered almost an axiom in farming operations, that no one should go in debt for any kind of manures, unless in favored situations where the price is very low, and the transportation cheap, (except perhaps for lime,) without first having fully availed himself of all his own resources; and his manure-heap, too, should be his first care. No farmer need ever be at a loss for *profitable* employment for himself and hands, in adding to his stock of this all-important requisite to successful operations; and in preventing the loss and waste of what is already accumulated. When not necessarily otherwise engaged, the time is well employed in many situations by hauling the rich earth, and decomposed vegetable matter, which has

accumulated in the marshes, leaves, weeds, &c.,* and incorporating them with the contents of his barn-yard; independent of their own fertilizing properties, they are valuable as absorbents, to receive and retain the more volatile ingredients that otherwise might be lost in the process of fermentation and decomposition; a few bushels of plaster may be used with much advantage for the same object.

It was the maxim of a wise man, who began the world with nothing, and became independent—and that too, without the charge of dishonesty or extortion ever having been alleged against him—that "a penny saved is twopence gained." It is emphatically true, with regard to the saving and judicious application of manure.

As an evidence of what care and attention in regard to making and saving manure will accomplish, it is within the knowledge of the writer that two loads of manure (with two yoke of oxen) have been hauled out this season, for every acre of arable land on the farm; and with a small exception, produced on the farm itself, without extraneous aid.

As germane to our present purpose and object, I will here remark, that many farmers whose lands most require "renovating," keep too many horses; in nineteen cases out of twenty, and for nearly all farm purposes, one or two good yoke of oxen are decidedly preferable. They cost no more at first, and will perform twice the labor; save in expense of harness, and still more in keeping; and after working five to six years under good management, are usually worth more than the first cost, for the shambles.

Marl.—I can say but little from experience, in the use of calcareous manures; but am fully satisfied both by information derived from others, and from personal observation, that wherever it abounds, it might be made A MINE OF WEALTH to the proprietor, and the adjacent districts which admit of water transportation.

The only apparent reason why they are not more so, is, either ignorance of its great fertilizing properties, or a lack of the necessary enterprise and industry TO BECOME RICH, when every facility for the purpose, is, as it were, laid at their very doors. The quantity of marl required to the acre, to produce much beneficial result, does not admit of extended land transportation: but there are thousands, if not tens of thousands of acres, bordering on, and near tide-water, both in this and neighboring States, now thrown out as waste lands, because they will no longer yield even a stinted growth of vegetation; most, if not all of which, might readily be reclaimed by the judicious use of marl; and at one-fourth the cost per acre, that lands in the interior—originally no better, if so good—are made to yield 10 to 12 barrels of corn, or 30 to 40 bushels of wheat to the acre. I have been informed by some of the large landed proprietors—not owning nor residing within less than eight to ten miles of the marl beds—that a boat load of a thousand to twelve hundred bushels of marl, rich in carbonate of lime, could be delivered at many of their landings, at an expense not exceeding $8 to $10. Yet not one bushel was ever used!

But as was justly remarked by one of these very intelligent and hospitable gentlemen, "it's no use to preach to a *deaf* congregation," and a further remark or two will only be added; not altogether without the hope that

* This seems to us to need some qualification, and presents to every farmer a question which deserves careful study. That is, how far he can make sure of remuneration for the cost of labor thus appropriated, and can he command the labor until the day of remuneration comes—which here again depends on the *markets?* Mr. Phinney, of Massachusetts, could afford to move a ton of stone from every six feet square of his orchard, because there were hundreds of thousands of hungry mouths, not employed in agriculture, within reach to demand his fruit—like young robins waiting for worms.—*Editors P. L. & A.*

something will eventually "stir them up," and induce a trial at least, of this valuable manure. It matters less how, when, or what quantity of marl or lime is applied: only MAKE THE APPLICATION, and that pretty liberally. Its application, like lime, is best made one, two, or three years, and on the surface, before breaking up the land, and thus give it the benefit of the winter's frosts and snows to dissolve and incorporate it with the soil.

Lime.—This, next to the proper draining (when necessary, for even lime will not enable us to dispense with it) and deep tillage, I consider the most certain and permanent agent in "renovating worn-out lands," of any other substance with which I am acquainted: whether mineral, animal, or vegetable; and when it can be obtained at a reasonable cost, even with some miles hauling in addition, it is generally to be preferred, if only one kind of "bought manure" is to be used. It may, however, be used freely in conjunction with all other manures, and with decided advantage, if done with judgment.

After many years' experience in the use of lime, I would advise in all cases where it can be accomplished, to spread it on the surface from one to three or four years before the land is broken up. The effect of a single winter's frosts and rains, will more effectually dissolve and bring it into action, and benefit the succeeding crop, as also the land itself, than is attained in a longer period, by ploughing it in as soon as applied. In this way also, a much larger quantity may be safely applied to the same land at a single dressing. As there is no loss to lime from atmospheric influence, it should be kept near the surface; and the *proper* quantity to use to the best advantage, can only be determined by the price, and the state the land may be in at the time. With a good sod of grass roots to receive it, 100 or even 150 bushels to the acre, *will do no harm;* but on stiff clays, with little soil or mould on the surface, 50 bushels would be a very liberal application as a first dressing, if put on immediately after ploughing. It would be better to apply a less quantity at first, and renew it as soon as an increased growth of vegetation could be obtained.

When lime is applied in very large quantities, and immediately incorporated with a poor soil, having little or no vegetable matter in it, the *effect* is to combine with the silicious particles—abounding more or less in all clay soils—and form hard, compact masses, that are not separated by years of after tillage. This mode, therefore, to say the least, is like "burying the talent;" for so much capital lies dormant, and neither benefits the farmer or his land. Twenty-five or thirty bushels as a first application, particularly if aided by even a light dressing of vegetable manure, will make a much quicker return for the outlay.

As to the *modus operandi* of lime, much has been written; and various, if not conflicting theories put forth; nor do all agree as to the most judicious mode of application.

I consider it altogether unnecessary here, to attempt any explanation of the chemical changes produced in the soil by its use, or to give my own opinion on the subject, though formed after careful observation and from years' experience. To the inexperienced, however, it is of much more importance to be informed *how* to use it to the best advantage. And, as previously remarked, it is of still less consequence *how* or *when* applied, so THAT IT IS DONE.

Lime will act very beneficially, as I know from experience, on stiff tenacious clays, and so near a state of sterility, as scarcely to reproduce the seed sown on them. But if used under such circumstances, and without the aid of any kind of manure, considerable time must elapse before much amelioration of the soil need be expected.

Theory without practice does not often carry much weight with it; and on the mind of the farmer, generally speaking, it acts with less force perhaps than with most other classes in the community; for unless an array of facts, or good evidence, is adduced to inspire confidence, he is slow to change; the more so, when he knows that even a partial failure in a single crop, from experimenting, will be sensibly felt in his slender income, and perhaps for a year to come. This feeling, to a certain extent at least, is all right and proper; for experiments, to test any new theory, are best undertaken on a limited scale: *time* may be lost thereby, but ***money may be saved in the end.***

I will now briefly give some account of the *practical* operation of my theory. My first application of lime to any extent, was 200 bushels, mostly air slaked, hauled six miles, and applied to four acres; just broken up for a corn crop, and harrowed in. This portion of the field particularly, was so thoroughly exhausted by previous bad management, that the yield in corn was only some five or six bushels to the acre; nor was the crop sensibly increased by the lime. As the main object in cultivation was to set the field in grass, the corn was followed by a crop of small grain, and a liberal supply of clover and timothy seed, and plaster: the latter producing no visible effect whatever, and nearly all the grass seed perished, leaving the surface as bare as before. But before the field again came in course for cultivation, the good effect of the lime was so evident by the growth of white clover—a *new* variety in that vicinity—that I was encouraged to lime the whole field, containing about twelve acres, and also including this four acres; put on as before, just after breaking up for corn. The crop on this portion was increased fully five to six fold, over that adjoining, and but recently limed; thus liberally paying all expenses, and has continued ever since to produce profitable crops. Plaster now acts on it with marked effect. The first application was made some eighteen to nineteen years since; and to test the *durability* of lime, these four acres have been kept for experiment, and without the addition of other manure; except a portion, intended for still further experiment. About two acres were sown in broadcast corn, with 200 lbs. Peruvian guano—then followed wheat on the four acres, and with 200 lbs. guano to the acre, leaving two lands without guano.

The corn was materially benefited by the guano; but the wheat was *not* benefited by the *previous* application of it, though it was nearly or quite doubled, over the two lands left without any guano: the wheat was harvested two years since; and no one could now point out by the growth of the clover, uniformly good on the whole, and equally limed, which portion had and which had no guano—the conclusion is, that the "renovating" effects of lime, are thus far, TEN times as durable as guano; how much longer remains to be seen.

Some nine or ten years since, I determined to reclaim an adjoining field, at whatever cost. I was told long previous, by one of my neighbors who sold his farm, and removed to the West, in order to settle on better land, that the attempt would be futile; or, if it ever was made productive, it would cost a great deal more than the land was worth. The prospect *was* forbidding; for the larger portion was as much reduced as could be, by shallow tillage, no manure, no grass seed sown, and constant washing, even to gullies, and producing little else than running briars. It was broken up in the fall and winter, to a much greater depth than it was ever ploughed before; sixty bushels of quick-lime to the acre, were applied in the spring, the ground well harrowed and planted in corn; such portions as required it, having been well under-drained—some two to three acres—and which were about the amount that produced any thing of a crop, or that more than paid

the expense of ploughing. A crop of oats and grass seed followed; as it was not considered worth the trouble and expense to put in a crop of wheat, on ¾ of the field. After six or seven years, the same field again coming in course, exactly the same plan was pursued, as to ploughing and lime; but rather increasing the depth than otherwise.

The crop of corn, though injured by the bud-worm, was good—enabling me to do what I had rarely or never done before, SELL from ¼ to ½ of the crop. Oats followed, on about ¾ of the field, with some five or six bushels of bones to the acre, and wheat on the balance, with guano: both heavy crops, and lodging over the greater part of the field. Then followed a wheat crop on the whole; manured as much as possible from the barn-yard, and on the balance, a light dressing of guano of some **80** to **100** pounds to the acre.

The average yield of the field was over thirty-three bushels to the acre.

These results are attained with certainty; for every field and lot are accurately surveyed, and the contents noted on the plat of the farm; and the product of this field was kept separate, threshed, and measured by itself. The greater portion suffered from the drought early last year; and the harvesting was badly done, owing to the fallen and tangled state of the grain from a storm, about the time of ripening; but I have no doubt several contiguous acres might have been selected on the lowest ground (the portion under-drained) on which the yield was over forty bushels to the acre.* This season, the same field yielded the heaviest crop of grass I ever harvested; and even on what was originally the poorest part, there is now a luxuriant crop of second growth clover, and intended for seed, that is lodging over the whole extent. We will estimate the profit and loss by figures:

To 60 bushels of lime, cost at the kiln, 16 c.	$9.60
7 years' interest, (though it paid in pasture in less time,)	4.03
60 bushels of lime, cost at the kiln, 12½c.	7.50
3 years' interest	1.35
6 bushels ground bones, at 50 c.	3.00
100 pounds guano (African)	2.00
	$27.48

CONTRA.

By 33 bushels of wheat, average price sold at $1.31	$43.23	
Estimate increase of corn crop, at least 6 barrels, at $2, (and entirely owing to the lime.)	12.00	
Estimate increase of oat crop, 20 bushels, at 40 c.	8.00	
Estimate increase of hay, 1 ton	10.00	
Estimate VALUE of clover seed, (for there would have been none without the lime,) 1½ bush. at $4	6.00	79.23
		$51.75

Making, in round numbers, **$50** per acre in favor of "renovating;" nor is the estimate a forced one. The actual increase of the crops is greater than the amounts assumed; and if a fair average was made of the wheat, in the joint crop of oats and wheat, the aggregate result would be increased some **$5** to **$6** per acre.

There should, perhaps, in the view of some, be a charge for draining, and for hauling and spreading the lime; also for the manure, for the crop of wheat; and for the expense of harvesting the INCREASED crops.

The two former are amply paid for in the increased pasture; and the manure was no more than the actual yield of the land itself, after the use of

* It was gleaned with the horse-rake, and by the hogs; yet sufficient seed was left on the land, to produce this year, a VOLUNTEER crop of wheat with the grass, estimated by many who saw it, as well worth harvesting.

lime, &c., which are charged in the account, and at more than the cost: and it is believed the increased product in straw and fodder fully repays the expense of harvesting: to say nothing of the present state of the land, as compared to what it was originally. It is now RADICALLY and PERMANENTLY improved.

When lime has been freely used, plaster will generally, if not always, act promptly and efficiently; and thus, at very small expense, materially aid in perpetuating the improvement. Previous to its application in this case, plaster was liberally used, but with no visible effect whatever: now, its action is as marked on the SAME land, as I have ever seen anywhere.

Wherever lime can be obtained at a reasonable price—say from twelve to twenty cents per bushel in a caustic state, (or at half price, if air slaked,) with even five to ten miles hauling, it may be used to advantage on most, if not all stiff clay soils.

In some sections, these prices are paid, and it is hauled fifteen to twenty miles; and by a class of men unsurpassed for industry and thrift.* The writer has known no instance where its use was persevered in, under whatever disadvantage it might be, in which success, to a greater or less extent, did not crown the effort; and many who borrowed money to procure it, in the first instance, have, mainly by its use, become independent; and *money lenders* themselves.

Bones—composed principally of phosphate of lime, and gelatinous animal matter, when crushed or ground, form one of the richest manures. It acts well either alone, or with other manures; and is particularly valuable to aid the growth of clover; for this reason, I class it decidedly before guano, at an equal expenditure of money, for "renovating worn-out lands." Although not so prompt in acting, it is far more durable, and more likely to produce a good crop of clover, to turn under. Clover being almost the only "green crop" that I have ever found much advantage from turning in.

I prefer its use, following the lime, and on the oat crop; at the rate of from six to ten bushels—or as much more as the renovator may please, for an increased quantity will do *no injury*. On the wheat, succeeding the oats, my practice is, to apply a light dressing of guano—say 80 to 100 lbs. to the acre, to mature and perfect the grain; and only on such portions of the field as the manure from the barn-yard will not extend to. By the time the clover requires the aid of the bone, it will have become sufficiently disintegrated and incorporated with the soil, to give the clover a vigorous start; and its effect on the grass crops is generally more durable than the vegetable manures.

The supply of *ground* bones is a limited one; but when to be had at a reasonable price (usually selling at forty to fifty cents the bushel) it may be used to advantage on all crops and on all soils; but with decidedly *less* advantage, after passing through the *alembic* of the glue manufacturer; (as I have proved—at least to my satisfaction;) thus depriving it of much of its fertilizing property. It is usually harrowed in with the seed, as it loses less by exposure to the atmosphere than most kinds of putrescent manures.

Guano.—This is one of the most active of all manures; and if the price would justify the application in sufficient quantities, it might aid very materially in "renovating worn-out lands." But considering the evanescent nature of its most active principle, ammonia, and the present high market price, viz.: the Peruvian at $60 to $70—and the more inferior kinds at $45 to $55—for the ton of 2000 pounds, it is much doubted whether the ultimate advantage, calculated on by many, will be realized. If the Peruvian

* In England they sometimes fetch it fifteen miles *on horseback.—Editors P. L. & A.*

could be obtained at about HALF this price—and it is believed such would be the case with a fair competition in the Peruvian market—the case might be different.

The writer has made liberal use of guano; and generally to profit, as to the immediate return; but in no case has much benefit been derived beyond the first crop; and rarely was any material effect perceived after the second year.

This opinion, so different from that entertained by some others, is not lightly formed, nor without several years' careful observation; and also testing the matter by numerous experiments, and on a scale sufficiently extended to prove the truth or fallacy of the doctrine held by some, that it is only a stimulant. Reference to one experiment may suffice, as they all tend to the same result, and nearly to the same degree.

In a field of some ten acres, one acre was selected near the middle, and extending through the field, so as to embrace any difference of soil, should there be any. On this acre 200 pounds of Peruvian guano, at a cost of about $5.00, were sown with the wheat. Adjoining the guano on one side, was manure from the barn-yard, at the rate of 25 cart-loads to the acre; and on the opposite side (separated by an open drain the whole distance) ground bones were applied on the balance of the field, at a cost of $6.00 to the acre: the field equally limed two years preceding. There was no material difference in the time or manner of seeding; except that the manure was lightly cross-ploughed in, and the guano and bones harrowed in with the wheat.

The yield on the guanoed acre was thirty-five bushels; the adjoining acre with bone, as near as could be estimated by dozens, and compared with the guano, was about twenty-seven bushels; and the manured about twenty-four bushels. The season was unusually dry; and the manured portion suffered more from this cause than either of the others; the land being considerably more elevated, and a south exposure.

The field has since been mowed three times; the FIRST crop of grass was evidently in favor of the boned part; the second and third were fully two to one over the guano, and also yielding much heavier crops of clover seed. On a part of the land, eighteen bushels to the acre of the finest of the bone were used; on this the wheat was as heavy as on the guanoed, and the grass generally lodges before harvest, as it also does on much of the adjoining land with twelve bushels of bone.

The action and durability of guano probably vary on different soils; and although it may generally be used to advantage in aid of a single crop, I have as yet no satisfactory evidence that its fertilizing properties are very durable: unless applied in such quantities as may in the end "cost more than it comes to."

Guano should *not* be used with caustic lime or ashes; nor very soon succeeding their application. It may with decided advantage be mixed with plaster, to fix and retain the ammonia; and for nearly, if not all crops, it is best to sow it broadcast, and *plough* in immediately.

Leached Ashes.—There are few, or none, who are ignorant of the value of this article as manure. But as the supply is rarely if ever equal to the demand, much need not be said on the subject. At eight to ten cents per bushel, if the cost of transportation is not too heavy, they may always be profitably used; in durability they are next to lime, and the action immediate. Few comparatively, except within the vicinity of cities or villages, or those with water or railroad facilities, can procure, or afford to use them.

Poudrette.—Much profit has not resulted in the use of this (the merchantable) article, so far as I have observed its effects on my own, or the crops of others. Such as I have purchased, has as yet produced but slightly

beneficial results on the crops to which it was applied. Its fertilizing property was diffused through such a mass of inert matter, that I concluded with half, if not one-third of the expense, more benefit might be derived from the purchase of some other kind of manure.

In the neighborhood of cities, where a supply can be obtained without so much adulteration, its use may be made very profitable.

Turning in Green Crops.—This plan of "renovating worn-out lands," has long been advocated by many. I have also given it a fair trial, and with the exception of CLOVER as *the* green crop, little advantage has resulted from its adoption: *very poor* land, without some extraneous aid, will not produce a green crop worth the turning in. It is questionable whether the same amount of time and labor (supposing the occupant without the means to purchase manure of any kind) could not be better employed on such land, in adding to his stock of manure, by composts; prepared from decaying vegetable matter, alluvial soil, &c., abounding more or less on all farms. If the land possess fertility to produce sufficient clover for pasture, the use of plaster either without or certainly *with* the aid of lime, will, with good management, make it yield a luxuriant crop. But it should be borne in mind, that to improve in this way, little mowing, and less pasturing, must be permitted. The land is not only benefited by what is *turned in*, but is also materially aided in the process of renovation, by what is *left out*, and on the surface; to shield and protect the soil from a parching sun, prevent throwing out the clover roots by the winter frosts, and washing away of the soil, by heavy dashing rains.

THE TRUE POLICY OF THE SOUTH AND SOUTH-WEST.

WE commend to the attention of our planting friends the annexed article, which we take from "The Louisville Journal," and in which they will find advice by aid of which they will be sure to bring to the side of their ploughs first the spindle, to be followed speedily and certainly by the loom and the anvil. Greatly does it rejoice us to see in our exchange papers growing evidence of the popularity of the doctrine which teaches that "population makes the food come from the rich soils," and that if we would cultivate such soils, we must adopt, as a national, and not a party or sectional measure, the policy which will enable us to consume upon, or near the land, the products of the land, returning to the great source of all production the refuse of her products, and giving to her improvement the labor that has been heretofore wasted in the work of transportation and exchange, and the manure that has been wasted upon the road and in distant markets. Great is truth, and it will prevail. The time is not now far distant when, throughout the whole length and breadth of the Union it will be admitted that ***protection is a farmer's and planter's measure.***

The Manufacture of Cotton Yarn in the South and West for Export.—GENTLEMEN:—"In my opinion you can spin *yarn* (cotton) and export it by the *ship-load* far better and cheaper than England can."

The foregoing is an extract of a letter from Mr. David S. Brown, of Philadelphia, who, as most of your mercantile readers know, has been for years a most extensive dealer in cotton goods, and is now largely engaged in their manufacture. No better authority on the subject can be quoted, and the foregoing opinion is entitled to the gravest consideration of our growers of cotton and food, and to the closest examination of our men of energy and capital who are turning their attention to manufacturing employments. The suggestion strikes my mind with great force, and will induce me to gather and publish the facts bearing on the subject. As it may lead to the development of a new and important source of wealth to us, it is right that Mr. Brown should have due credit for his sagacity.

The yarn trade of Great Britain with foreign countries was opened about 1814; from that year to 1823 inclusive, the value of her exported yarn compared with that of other exported cotton goods increased slowly from say one-seventh to one-fifth; the ratio of increase since has been greater. In Burn's "Manchester Commercial Glance," are tables of the export of cotton yarns from 1831 to 1846 inclusive. I copy here the figures of every fifth year, which will show the average increase of the trade.

Cotton yarn exported from Great Britain in pounds:

1831	58,846,308
1836	85,195,702
1841	115,665,478
1846	157,130,025

Of the exports of 1846, 25,421,742 lbs. were to the British colonial possessions, including all of India, leaving a demand of 131,708,283 lbs. in countries from which we should not be excluded by differential duties.

Calling the bale 400 lbs. and adding 10 per cent. waste in the change of the material into the yarn, we have markets as free to us as to Great Britain for 362,197 bales of our great staple, and in a shape that requires but little skill, comparatively, in the transformation.

In the infancy of our cotton trade, the cotton was imperfectly cleansed on the plantation, and exported in bags. The use of the cotton-gin and the cotton-press, by lessening the weight and bulk, has lessened the cost and increased the consumption of the staple. The next most obvious process is to lighten and compress the cotton still further by changing it into yarn. This done, we could take the next step with safety and reach the maximum of compression. Our bulky cotton and our bulky and perishable food would then be exported in their most convenient and imperishable forms—manufactured cotton goods.

Perhaps we have the actual ability to take this step now, and only lack the confidence. It is, however, very easy to take that which precedes the last.

To spin yarn of the ordinary grades we require not over two-thirds of the machinery and power, one-half of the capital, and one-third of the skill which are necessary to convert the yarn into cloth. The waste in the first conversion is about 10 per cent., and in the latter from 1 to 2 per cent.

The markets supplied with cotton-yarn by Great Britain are, on the average, as near to us as to her.

In supplying these markets, common to us both, we have (supposing that the conversion is effected on our central coal fields) these advantages:

1. A saving in power of at least one-half.
2. A saving in transportation of three or four thousand miles, to say nothing of the expensive land carriage in England.
3. An exemption from English taxation in all its multiplied and oppressive forms.
4. A more unrestricted commerce with the world. We are less liable to war, and our international policy is so liberal that our ships and products are received by all nations on the most favored terms.

That Great Britain has more capital and more skill than we have, is readily admitted; but it will be noticed that, when we have the material so near us, far less capital is required, and that, even if we have not the skill to weave, we have, or could readily have, the skill to spin. Our labor is more expensive than that of Great Britain, but the cheapness of our food is nearly or quite an equivalent.

I have not the leisure now nor the full information to go into this subject in detail, and the chief object now in view is to draw the attention of our cotton yarn manufacturers to the facts. They are now supplying our home market. Is there any reason why they cannot profitably enlarge their operations and throw their surplus into the markets nearest to us. The Louisville merchant finds no difficulty in exporting flour directly to and importing coffee directly from Rio Janeiro. He can send cotton yarn with equal facility.

I have not the means here of ascertaining what numbers of yarn are exported from Britain. In the Report of the Secretary of the Treasury, 1835–6, it is stated that they are chiefly of the coarser kinds. It is presumed that the coarse numbers are imported by Russia, South America, India, and China, and the high numbers by Germany, Belgium, &c.

We should, of course, be excluded from England by duties, and perhaps as long as the cotton is shipped by sea to the Eastern manufacturing States we could not find a market there. But, if the internal facilities of transportation are enlarged and cheapened so that the produce of the Northern cotton district can be sent East in this direction, we may be

able to incorporate some of our food, labor, and coal into it and send it on to be perfected by those who have more capital and skill.

It may be a matter worthy of investigation whether a portion of the slave labor of Kentucky and Tennessee could not be profitably employed in the business indicated, at healthy positions which are convenient of access and abounding in coal. When we are connected with Tennessee and Northern Alabama and Mississippi by a railroad passing through the western coal-field of our State, it may prove more economical and profitable to pass the cotton through all the simple and early processes of its manufacture on this route to the East and to Europe than to send it by the Southern route in its raw and bulky form.

In the hope that these crude suggestions here made will elicit all the facts bearing on the subject, and with the intention of pursuing the inquiry further,

I am yours, S.

AGRICULTURAL CAPABILITIES AND PRODUCTS OF THE SEVERAL STATES.

It would appear, by a letter from Mr. Keener, intended to follow immediately after these remarks, that the *State Board of Agriculture of Ohio* has, by circulars in the form of interrogatories, instituted systematic inquiries into the course of husbandry, and the products of the several counties of the "Buck-eye" State. Such inquiries are likely to be conducted with much more care and minute reference to the agricultural practice and habits, as well as resources of any particular State, than the general census under the authority of the national government; but they ought not, as they cannot effectually supersede the necessity of yet more comprehensive and authentic returns which should be taken by *State authority*, half-way intermediate, in point of time, between the United States' censuses.

In a short time, as soon as the high degree of intelligence, and the enlarged public spirit which evidently animates the Maryland State Agricultural Society, can get fairly to work, we shall doubtless witness similar fruits of its usefulness by the prosecution of well-directed investigations into all the resources and practices of Old Maryland, than which no State in this Union can boast of superior advantages on the score of soil, climate, natural facilities and resources; together with a knowledge and disposition to improve them.

The time was, when tobacco was $10 a hundred, and wheat $2 a bushel, that too many of her worthy sons became extravagant and reckless, laying out thousands in costly residences, rich furniture, and fine equipages; and yet worse, too many of them betaking themselves to gaming and frolicking; but let us hope that such folly has passed away with the delusive prosperity that gave it birth. Let us hope that adversity and reflection have done their office, and that the ridiculous love of ostentatious display, and the ruinous and disgusting excitement of the gaming-table, have given way to the calm and inexhaustible pleasures of reading, and the eager pursuit of knowledge, with a view to a more honorable and intellectual prosecution of their own pursuits on their own farms. We would not have them to be a whit the less hospitable, but that they should learn the difference between uncalculating extravagance and that well-regulated hospitality which has reference at once to the means of the host and the comfort of his guests, with whom, if men of sense, the enjoyment is always the greater when the style of entertainment is free from all signs of vanity and extravagance.

What the farmers of Maryland NOW want is CAPITAL, to enter upon a career of improvement, which, generally speaking, they would be at no loss how to conduct; and surely if there be any condition or employment enjoy-

able in itself, and salutary as an example to the country, it is that of the man who is engaged, with heart intent, on the ditching, draining, cleaning up, repairing, restoring, and embellishment of an old, exhausted, and dilapidated estate!

What ought to be more flattering to that true pride which is not only justifiable but commendable and auspicious in every cultivator of the soil, than to have the traveller as he passes, either rein up his horse to admire, or point from the window of the car as it flies along on its iron track, exclaiming: "Ah! look at that!—that looks something like a farm! There are signs of thought, and of honorable ambition. There you behold industry guided by knowledge. There it is that visible improvement and increased productiveness vindicate the cause of agriculture, and assert its claim to be ranked among intellectual professions." Such are the reflections that every thinking man makes—such the observations that every man hears, as he passes the *laurel*-crowned oasis, half way in the great desert which some years since spread over the country between Baltimore and Washington, but which is now giving way slowly but surely to the force of ***mind applied to the art of cultivation.***

But we are wandering from our purpose, which was to introduce the following, on

THE WHEAT CROP AND ITS CULTURE.

BY S. KEENER.

Melville Grove, Champaign County, Ohio, November 29, 1848.

There are in this country, very few, if any, farmers who manure their lands regularly; and *perhaps it would be difficult to find a single individual, who makes it a business to attend to his barn-yard with a view to the accumulation and preservation of manure.* In consequence of this general neglect, our wheat crop is grown under great disadvantages, and the average yield much less than it ought to be. It is very common among our farmers to take several crops of wheat in succession off the same land. I know of several instances, where four crops have followed in succession, and one, where the sixth crop was taken off this summer. This practice of stubbling, I am happy to say, is growing out of favor, it being found greatly to promote the growth of chess, cockle, and other noxious weeds, consequently greatly lessening the crop. The practice of seeding among the standing corn, is *becoming more and more common*, and as far as my observation extends, with *as much advantage as on a clover sod broken up immediately before seeding*—the grain is usually ploughed in with double shovels. Another labor-saving mode of seeding is to cut the corn, and shock it in the usual way, except that the shock rows are placed further apart—then sow and harrow in; this mode has not been in use long enough to enable me to speak favorably of it.

Having thus hastily given you a glance at our careless habits, I will proceed to give you an account of the average yield per acre, which, perhaps, I can give with a tolerable approach to accuracy, as I not only keep an account with my wheat crops every year, but I also keep a tolerably fair running account with the crops of my neighbors, which I come at by personal observation, information derived from the owners of threshing-machines, and from my neighbors themselves.

From these sources, I am enabled to state the average yield of this county, for the past four or five years, at 13 bushels per acre. The average of this year—1847–'48—will be a shade higher; I put it at 14 bushels per acre.

To corroborate my statement of average, I give you a transcript from my ledger, of my wheat crops for the past four years, as follows:

	Years.	Acres.	Yield. Bushels.	Average per acre. Bushels.
	1843–44	126	1757	14
	1844–45	86	1333	16
	1845–46	100	1625	$16\frac{1}{4}$
Fly very destructive.	1846–47	110	1185	$10\frac{1}{2}$
	1847–48 Not yet ascertained.			
				4)$56\frac{3}{4}$
Average for 4 years				$14\frac{3}{16}$

Thus you see that the average of four years gives me 14 bushels and 6 quarts per acre.

I might here remark, that one-half of my seeding, for the past four years, has been on clover sod, the other half on wheat stubble and corn ground, ploughed in with double shovels, among the standing corn.

Of the crops of 1844–45, and 1845–46, one-half at least was on stirred fallow, part of which being slightly manured, yielded from 22 to 25 bushels per acre. My experience and observation go to show a gain of two to three bushels per acre in favor of stirred fallow, over sod ground ploughed immediately before seeding: and further, where the ground has been liberally manured, with stable or barn-yard manure, well rotted, the grain on the stirred fallow, thus treated, will be from seven to nine bushels per acre more than the stirred fallow, without the manure.

In this connection I will mention one fact worthy of notice, viz.: that our best wheat lands are those that have been longest under cultivation, and nearly run down. These lands, when restored by liberal treatment, with clover manure, and a few years' rest, uniformly yield from five to eight bushels more to the acre than lands similarly treated, that have been recently brought under the plough. On the latter, the growth of straw is very rank, the heads imperfectly filled, and the grain shrivelled; on the former, the straw is comparatively short, heads full, the berry plump, well filled, and heavy.

In regard to the cost of raising wheat, it varies but little one year with another. In very dry seasons, we cannot plough as much in a given time as when the ground is in good order; and the wear and tear of ploughs and horse-flesh is greater. Some seasons we have to handle one-third more straw, for the same quantity of grain, which of course adds something to the expense of the crop. It is frequently varied a little, either way, by the cost of seed wheat, but from a careful account kept with my wheat crop, for several years, I make the cost per acre $5·60, as follows:

	Per acre.
Ploughing	90
Seed wheat and sowing (1¼ bushel to the acre)	$1·05
Laying out and harrowing, or ploughing in	27
Cutting and putting in shock, and board of hands	1·00
Hauling in or housing and stacking	60
Threshing, ricking straws, and cleaning up, board, &c.	1·28
Hauling to market, not over 5 miles	50
Cost per acre	$5·60

The cost per bushel can be readily ascertained, by dividing the cost per acre, by the yield per acre, thus, suppose the yield per acre to be eight bushels:

Yield per acre.	Cost per acre.	Cost per bushel. Cents.
Divide 8 bushels into	$5·60	70
" 10 "	5·60	56
" 12 "	5·60	46⅔
" 14 "	5·60	40
" 16 "	5·60	35
" 18 "	5·60	31
" 20 "	5·60	28
" 22 "	5·60	25½
" 24 "	5·60	23⅓
" 26 "	5·60	21½
" 28 "	5·60	20
" 30 "	5·60	18⅔
" 32 "	5·60	17½
" 34 "	5·60	16½
" 36 "	5·60	15⅝
" 38 "	5·60	14¾
" 40 "	5·60	14
" 50 "	5·60	11½

So that the thrifty husbandman, who raises 50 bushels per acre, does it at a cost varying but little from 11½ cents per bushel; the additional cost would be in handling more straw, threshing out, and hauling to market more grain; and I might add, what would be necessary to such a result, preparing and hauling out manure; for I have never known an instance in this county, where more than 18 bushels to the acre have been

raised without it. Manure, therefore, ought to be charged to the crop, when used, unless the straw be considered of equivalent value. The straw I put against the interest on the cost of land, though perhaps it would cover both items if properly cared for.

I have made several approximate estimates of the aggregate amount of wheat raised in this country. I do not pretend that any of them are precisely accurate; I however believe them to be as near the amount as can well be ascertained, without a more precise knowledge of the number of acres under wheat culture.

The Auditors' Reports show the number of acres in this county to be 260,000; assuming every fourteenth acre to be in wheat, will give 19,000 acres, which at an average yield of 14 bushels per acre, will give us 256,000 bushels.

In Urbana township—the township in which I live—there are 600 voters; of these, 70 are farmers, which gives to agriculture about every eighth voter; the county seat being in this township, makes the proportion of farmers to the voters less than in most of the other townships in the county. Taking, then, Urbana township as a basis, and averaging her 70 farmers at 350 bushels each, it gives 24,500 bushels; deduct her 600 voters from the county vote, say 3,700, and we have left 3,100 voters, which amount, divided by 5, will give 620 farmers, for the remaining eleven townships; average them at 350 bushels each, and we have 217,000 bushels, to which add the yield of Urbana township, 24,500, and we have the aggregate of 241,500 bushels.

By assuming every fifth voter in the county to be a wheat grower, we have 740 farmers; average them at 350 bushels, and the amount is 259,000 bushels.

In the republication of such articles, our sense of duty would always prompt us to turn them to useful account, if we had time, by accompanying them with such reflections as arise on a view of them, and as may seem adapted to give them practical application to other parts of the country.

Here, for instance, is seen, for the comfort of farmers in the old States, which so many are abandoning to go to the new ones, several notable particulars:

1. That worn-out lands when restored, yield larger crops and of better quality than richer new lands. "Our best wheat lands," says Mr. Keener, "are those that have been longest under cultivation and nearly run down." According to the system he describes, as being that commonly pursued, it will not be long before the lands of Ohio will have been generally thus prepared, by exhaustion, for producing better crops! "It is *very common* among our farmers to take *several crops* of wheat off the same land." So much for Ohio management. "Always taking out of the meal tub," says Poor Richard, "and never putting in, will soon come to the bottom."

But there are other points of view in which this communication of Mr. Keener will not fail to attract the reader's notice.

It cannot fail to suggest to him the question how vain is the hope of the Ohio grain grower, who is led to depend on the *foreign* at the sacrifice of the *home* market!

The same number of "The Cultivator" informs us that in Mr. Keener's market—Cincinnati—"wheat is DULL at 70 cents per bushel."

"*Cincinnati, April* 14.—Flour has been depressed but is now improving. Sales yesterday at $3·40 per bbl. Wheat is dull at 70 cents per bushel. Corn and Oats 25 @ 28 cts.; Barley and Rye, 55 @ 60 cts.; Potatoes 58 @ 62 cts. per bushel. Mess Pork, $9 per bbl. Lard No. 1, 6¼ cts. per lb. Cheese, for shipment, 6¼ @ 6½ cts.; Butter, for packers, 12½ cts.; retails at 16 @ 20 cts., and for best fresh rolls 25 cts. (very scarce.) Eggs are plenty; 5½ @ 6 cts. per doz.; retail at 7 cts."

Looking, then, to the English market, where wheat was about $1 per bushel, (see our article on the corn trade of Europe, in this number,) and after all expenses of sending from Cincinnati to London are deducted, how much would be left, to be received over—*the left shoulder?*

Mr. Keener sets down the average product of the county at 14 bushels per acre, (the same as of New York,) and the average aggregate of the farms at 350 bushels. Then take his estimate of 40 cents a bushel for cost

of producing and sending to market, and there will remain **30** cents a bushel, which will leave as an average for the farmers of that county, from their great staple crop, an income of **$105**!! while that of a good field hand is **$144.**

It will be seen that, according to his estimate, where the yield is not over **10** bushels, (the labor being hired, as we presume, at about the cost of hired labor in Delaware, and in Hartford and Cecil County, in Maryland,) he averages the cost at **56** cents per bushel, which leaves the farmer just—*nothing for his pains!* But we must leave the reader to pursue his own reflections and calculations, venturing only to add that he who reads without making them, reads superficially and to very little account. Here is a statement of some other items of OHIO FARMING:

A TALL CROP OF CORN!

"CORN CROP.—I hereby certify that I planted one acre of ground in yellow corn, last spring, on my farm, eight miles from Cincinnati, on the Lebanon turnpike; description of the ground and culture, as follows:

"The down barley and stubble coated the ground abundantly. Ploughed all under last fall; planted the corn in April; the furrows three and a half feet apart, north and south; the stalks in the furrows from eight to ten inches apart. Gathered the corn the first of November; placed it in a loft twelve feet from the ground. It remained there until the 14th inst., then measured in a barrel, and one barrel shelled, in the presence of a number of witnesses; there being ninety-one barrels; the shelled corn of one barrel weighing ninety-eight pounds—making one hundred and fifty-nine bushels and fourteen pounds, that grew on, and was taken off, said acre, and at an expense of twelve dollars the acre.

"Nov. 15, 1848. JOHN CLARK."

We get the above from a late number of "The Ohio Cultivator," in which the price of corn at Cincinnati is put down at **25** cents. Suppose, then, the average yield of the State to be **40** bushels to the acre, which is quite as much, probably, as the truth will allow, and we have **$10** to the acre.

Mr. Clark puts down the *expense* at **$12** the acre. Now, after making every allowance for the greater expense of harvesting the heavier crop, and then tell us, good reader, since the value of the article at the place of production is equalled by the expense of production, first—

What is the temptation to him of the Old States to sell off and move to Ohio? And, secondly—

What dependence can the CORN-grower of Ohio place upon the foreign market—suppose him to make **50** bushels to the acre?

"REMARKABLE COW AND LARGE CROPS.

"The following extracts are from the Report of the Hamilton County Agricultural Society, for the past year:

"PREMIUM FOR BEST COW FOR BUTTER.

"*To the Hamilton County Agricultural Society*:—A statement of butter made from one cow in 28 consecutive days, and is offered to the Society for its premium on the cow that would make the most butter in ten consecutive days—the property of E. R. Glenn—commencing May 29, A. D. 1848:

"1st week of trial, 12 lbs. 8 oz.
2d " " 15 lbs. 10 oz.
3d " " 16 lbs. 2 oz. } = 32¾ lbs.
4th " " 16 lbs. 10 oz. }

"N. B.—The 3d and 4th weeks are offered to the Society for its premium, being 32 pounds and 12 ounces of butter in 14 consecutive days, making 2 pounds and 5 ounces per day—or in 10 consecutive days, 23 pounds.

"State of Ohio, Hamilton County, ss.

"Personally appeared before me, the undersigned, Mrs. Jane Glenn, who made solemn oath that the above statement of butter, made by herself from one cow, is true, as she verily believes, from personal knowledge. JANE GLENN.

"Sworn to and subscribed before me, this day of September, 1848.

"JOHN CLARK, Justice of the Peace.

"*Manner of Feeding.*—Pastured on clover and timothy pasture, slopped with about one gallon of ground corn and barley meal night and morning, and from five to ten ears of corn per day when she would eat them. EDMUND R. GLENN."

A cow of Mr. Glenn's (probably the one above mentioned) gave in 10 consecutive days, 80 gallons and 1 quart of milk, and Mr. Glenn said, "said cow is now giving 6 gallons per day, and it is over 4 months since calving, averaging 7 gallons a day, will make in 4 months 840 gallons, and we have made 2 pounds of butter per day from said cow." But look at the feed—pasture, clover, and timothy—slopped with a gallon of corn-meal and barley-meal per day.

Undoubtedly a very "remarkable cow;" but what a subject for a lady to SWEAR about!

"PREMIUM CROP OF HAY IN OHIO.—A premium to Edmund R. Glenn, for one acre of timothy hay, yielding 3 tons and 250 pounds, as shown by affidavits and the weigh-master's certificates.

"STATEMENT.—Limestone clay soil—subsoil yellow clay—has been mown for six years previous; was top-dressed with manure last fall, about ten two-horse wagon-loads to the acre.

"Expense of mowing		$1·25
Curing and putting in barn		1·25
Marketing and weighing		7·50
Ten loads manure		2·00
Rent of land		4·00
		$16·00
	Cr.	
By 3⅛ tons hay sold for		$42·50
		$26·50"

Is it not, therefore, obviously the interest of the Ohio farmer to follow the advice of General Jackson, and encourage domestic manufactures, that labor may be diversified, and the rival be turned into a customer, bringing his loom and his anvil, his trowel and his saw and hammer, near to the plough—instead of importing into our country millions of bushels of grain and provisions, in the form of foreign—chiefly English—manufactures, the cost of which is chiefly made up of the provisions consumed by the operatives?

Cotton-Seed Extracter.—This new invention of Mr. Stephen R. Parkhurst, is said to be the most perfect machine of the kind, and will prove of the greatest advantage to all branches of the cotton manufacture. The machine is of the simplest construction, and it seems a wonder that the idea had not been long since suggested. It is composed mainly of two cylinders, closely set together, a feeder and the ordinary fan. The cotton containing the seeds is thrown on the feeder, from which it is taken by the cylinders, which extracts the seeds whole, the cotton being passed by the fan into a receiver. The quantity of cotton cleaned by this machine will far exceed that of the ordinary saw-gin now in use, and a third less power is required to keep it in operation. By this method the texture and length of the fibre is completely preserved, the value of the cotton will be greatly enhanced, and the intrinsic worth is increased from a cent to a cent and a half per pound. It is calculated that a thousand pounds of cotton can be extracted in the same space of time that is required to extract twenty-four pounds by the common saw-gin. The machine may be worked for ten years without requiring repair. It will, when generally known, supersede every thing of the kind.—*New York Farmer and Mechanic.*

ON BREAKING OXEN.

BY ELISHA WHITTLESEY, ESQ.

Washington, April 30, 1849.

JOHN S. SKINNER, ESQ.—DEAR SIR:—I have read the conclusion of your article on "The advantage to be derived from a more extended use of Oxen," in the December number of "The Plough, the Loom, and the Anvil." In regard to learning steers to work, permit me to relate the mode adopted by my father, (who was one of the best agriculturists in the north-western part of Connecticut, and in which I served somewhat of an apprenticeship.) As far as was practicable, he not only endeavored to match his steers, in color, size, and strength; but in temper, some cattle, like men, are more irritable, nervous, or obstinate, than others, and will never work well together, even if they are about the same strength. An agriculturist should raise his own stock, and, knowing the disposition of his cows, as every man and boy will, who is among them and milks them, he is able to match his steers to be alike in temper, as well as in the other qualities mentioned.

The best age to break animals to the yoke is when they are calves. Small yokes with bows, staples, and rings, well finished, should be prepared, and the calves yoked, and drove about every day for several weeks, commencing when they are three or four months old. After they are used to the yoke, and are taught to "haw" and "gee," a small chain may be attached to very light burdens for them to move, such as a small stick of wood, or a hand-sled. The practice may be advantageously prosecuted at one and two years old; but they do not forget their knowledge when calves, and are easily subdued at three years old.

When steers, two or three years old, are first taken in hand, it requires three or four resolute men to connect them by the yoke, which should be small and light, but as well finished as if it was of a size sufficient for old oxen, and to be used on them. Care should be taken not to frighten the steers. The barn-yard fence should not permit any bullock to break it down, or leap over it. The steers to be yoked should be driven into it; they should be secured in a corner, by the men closing upon them, and the man selected to catch the steers should advance by the side of the one which is to work on the off-side, and, seizing the left horn with his right hand, he should hastily place his left hand under the steer's jaw, and move it forward until two or three fingers enter the right, and the thumb the left nostril, the other men at the same time pressing so close as to prevent escape. A struggle generally follows, which would overpower and frighten a man not skilled in the business of breaking steers. When the animal stands still, the yoke without bows is to be carried by a man on his left arm, and by his side, who having a bow in his right hand, he passes it under the neck, and enters the bow into the yoke, and pins it. If there is not a sufficient number to prevent the steer from escaping while the other is being caught, a chain should secure the yoke to a post, drawn close up. The steer to work on the near side is to be caught in the same manner, and yoked with his fellow. A strong, steady yoke of oxen is to be connected behind the steers with a chain, and another yoke of oxen under good command is to be connected forward, and the chain being loosed from the post, the three yoke are driven around the yard, or elsewhere, and after a little exercise of this kind, a wagon or cart may be attached to the yoke of the old oxen, and the team put upon the road.

The steers should be treated with great kindness, even if they are obsti-

nate and sullen. Tying tails together should not be tolerated, nor is there any use in confining their bodies together by passing a rope round them, as recommended in the article referred to.

If one of them falls down, and will not get up by moderate efforts, place over him a sufficient number of men to keep him down, and having removed the yoke from his neck, and being prepared with a small strong rope, tie it lightly round his hind leg nearest the ground, then bring back the fore-leg on the same side, and tie that on the other, and the other two are to be secured in the same way, and the steer left to his own meditations. After a while he will attempt to rise, and will put forth his whole strength to extricate his legs, which will not avail him if the tying is thorough, and skilfully done. The rope is to be removed after all efforts cease, and the animal thus subdued will never fall down in the yoke afterwards, to gratify a sullen temper.

If calves are regularly curried in the winter, and handled, they are easily managed afterwards. The general position of the teamster is on the left, or near side, opposite the yoke of the hind oxen. Occasionally he may advance opposite to the middle of the second yoke of oxen, if the team consists of three yoke. If he cannot manage three yoke in a team, he should lay down his whip, and permit one more skilful than himself to take it.

I entirely depart from Mr. Gilman, (page 357,) in his direction to use "a goad to drive with." A teamster, to drive three yoke of oxen, should have a whipstock of blue beach, hickory, or hazle, from eight to ten feet long, from half to three-fourths of an inch in diameter at the butt end, with so true a taper to the small end as to spring evenly, near two-thirds of the length. For two or one yoke of oxen the stock may be less, and shorter. The lash should be made six feet long, with four strands, braided hard, of woodchuck skin, tanned in soap, about the size of a shank of a common-sized small gimblet, one strand to be passed round the others in every two or three inches, so as to secure the strands from separating as the whip is worn by use. The lash should be tied firm to the stock, from four to five feet from the small end of the stock, by a string cut from the skin of which the whip-lash is made, which should be passed through a loop at the end of the whip, and when so secured, the lash wound round the stock about two feet, and again secured by a string, and so to the end, leaving about twenty inches of the lash pendent. The whipstock may be sharpened at the end, to move suddenly the near hind ox, Gee, if necessary. Being prepared, the teamster bears the whip on his right arm, and sustained by his right hand, with an angle back of about forty-five degrees. The teamster should have every ox under his eye constantly, whether his team is attached to a wagon, cart, plough, log, or other draught. A well-disciplined team requires very little use of the whip. An earnest word, with a corresponding look from the teamster, will cause every ox to spring forward. Not more than three inches of the end of the lash should touch an ox, and the stock should never be permitted to reach him, when a blow is aimed with the lash.

The article to which reference has been made is a very valuable one, and may be read with advantage by every practical farmer in the country.

Butter.—Dr. Merryman, of Springfield, Ill., has invented a process by which butter may be packed and kept for any necessary length of time, in any climate, in a state perfectly sweet, without salt, or any other chemical agent. Butter prepared in this way has been kept for two years, apparently as fresh and sweet as when taken from the churn. Means have been taken to secure a patent for the machine.—*Springfield Daily Journal.*

WIRE FENCES.

THERE are many districts in which wood has already become too valuable to be used for farm enclosures; others again, as in the larger prairies, in which it is not even to be had—and it is now very evident, that in the older States at least, the old system of fencing will have to be abandoned entirely, and that at no distant day. As estates become divided and subdivided, the cost of enclosure becomes enormous—in France, from this cause, the system has been abandoned altogether—not so in England, for there the laws of entail prevent this division. Eventually, our laws of inheritance being the same, we will be compelled, like the French, to do away with fencing entirely. In the mean time, it becomes us to cast about for some substitute for the expensive and weed-sheltering wooden worm-fence. The stone fit for fencing does not exist in abundance; we must look to the hedge and to the wire fence, and wooden or cast-iron posts. The frequent and rapid subdivision of estates with us will probably preclude the hedge from coming into very general use. Then, again, it is questionable, whether since the application of galvanism to iron wire, and the rapidity with which the wire fence is put up and removed, it would be compatible with good economy to plant hedges at all. Hedges, too, are liable among others to two serious objections—they draw the land, and breaches once made in them are of difficult repair. Though we incline to favor the locust or cedar post and iron wire—we will give directions for establishing each, with estimates of cost—and leave to our readers to decide for themselves.

Hedges.—After repeated trials, from colonial times to the present day, it seems to have been fairly decided, that the Osage Orange* (*Maclura aurantiaca*) is the best hedge plant that we possess. Without referring to other plants, foreign and native, that have been cultivated for the purpose, we will give the following short description, taken from David Landreth's capital work on modern gardening: "The Osage Orange is admirably adapted for hedges: it is of rapid growth, perfectly hardy as far north as Pennsylvania, is not subject to disease, is armed with sharp spines, which pierce or puncture, and, *abounding in acrid juice*, is not browsed by cattle."

Directions for making a hedge.—Prepare the ground you wish the hedge to stand upon precisely as you would a flower border, in regard to manure, tilth, &c. Let this border be four feet wide at top, make it twelve inches high by throwing up the dirt from slight trenches cut on each side—along the centre of this border plant your seed in two parallel rows—twelve inches apart and six inches in the drill—young plants may be used, but the seed are best (the seed is sometimes soaked in hot water until about to sprout.) Plant after all danger of frost is past—have a small nursery of a rod or two square to draw plants from to replace any that may fail in the rows—*the plants must be carefully weeded and cultivated for the first two years*—and until they reach the height at which it is intended the hedge shall stand, they must be guarded from stock.

Trimming and after-management. (Abercrombie.)—"If designed to train the hedge regularly by clipping it with garden-shears, it should be annually

* The Maclura is probably not adapted to our climate north of the Delaware. It has been fairly tried at the magnificent country residence of Mr. Cushing, near Boston, and as we understood from him, was "found wanting" in hardiness to resist the long and severe cold of that latitude. It is not likely to have failed for want of a fair chance, at the hands of one whose munificence leads him to spare no expense where any thing is to be done useful in agriculture, or improving to the horticultural taste and embellishment of the country.

performed in summer, observing, however, to top it but sparingly while it is young, until arrived at its intended height: only just trim off the tops of the straggling shoots to preserve a little regularity, and to promote lateral wood to thicken it as it advances, and cut it in also moderately on the sides; but when arrived at nearly its proper height of four, five, or six feet, or more, then trim close on the sides and top, annually, to preserve it thick, and within its proper bounds; in cutting the sides, always cut it nearly to the old wood of the former year's cut, otherwise your hedge will get too broad; and keep always the top narrower than the bottom."

Wire Fencing.—On this subject, the annexed letters from "The Genessee Farmer" cover nearly the whole ground. We will add that now that iron is getting so abundant, the subject of wire fencing is one well worth a little study, for we are firmly persuaded that as the cheapest, neatest, and most durable, it will certainly within a few years, in most districts, supersede all others.

EXPERIMENT IN WIRE FENCE MAKING.

BY D. KINGMAN.

MESSRS. EDITORS:—Believing that my brother farmers feel an interest in whatever experiments others may try, whether useful or otherwise in themselves considered—especially if facts are stated, so that they can practice, throw away, or improve upon them, as their judgments may direct—I have been induced to send you my experience in making wire fence.

During the last fall I constructed 104 rods of wire fence in the following manner: I placed red cedar posts one rod apart, the posts being sawed about 3½ inches square at the bottom, and 3½ by 2 inches at the top, and set firmly in the ground to the depth of 2½ feet. I then bored holes through the posts with a ¼ inch bit—the upper one 4½ feet from the ground, and then 9, 8½, 7½, and 6 inches below, using five wires. Five inches below the lower wire I placed a board 14 inches wide, (with a short post in the centre to which I nailed the board,) which comes near enough to the ground. I then drew the wires through the posts and strained them by means of a lever, one end of which I stuck into the ground. I then looped the end of the wire around the lever near the ground, and while one is drawing upon the top of the lever, I plug the hole tight with pins of red cedar, previously prepared. I usually strained the wires 15 or 20 rods at a time, then spliced the wires by looping and twisting the ends, and proceeded in like manner again. After the wires are in and the boards on, I take pieces of wire of the right length and make one end fast to the upper wire, and then wind it round the wires below till I come to the board, through which I bore a hole and fasten the lower end of the wire; three of these wires between each two posts, thus fastening it all together.

The upper and lower wires are No. 10, and the others No. 11. I bought my wire of Messrs. PRATT and Co., of Buffalo, at $7·50 per hundred. The five wires weighed 355 pounds. The wire that I used to weave in up and down was No. 16, and cost 10 cents per pound: it took 25 pounds. My posts I bought in the log (pretty large ones) at $12 per cord; one cord made 105 posts, the number used. It took 2000 feet of hemlock boards, which I reckon at $7 a thousand. The sawing of the posts was $2·25. The cost foots up as follows:

355 pounds of wire, at 7½ cents	$25·02
25 pounds of wire, at 10 cents	2·50
One cord red cedar posts	12·00
2000 feet boards, at $7	14·00
Sawing posts	2·25
Making the cost of materials	$55·77

Which being divided by 104, the number of rods of fence made, gives 53½ cents as the cost per rod—aside from nails, of which I kept no account.

Some of your numerous readers may be anxious to know whether such fence will answer the purpose in all cases. I can only say that mine is a road fence, and that when it was built, there was a good crop of pumpkins lying in the field along side, where they grew, and that notwithstanding many cattle and hogs made the attempt at them, they did not succeed; and my short experience goes far to convince me that no cattle, hogs, or fowls will get over or through it.

Ridgeway, N. Y., January, 1849.

WIRE FENCE—MODE OF MAKING, EXPENSE, &c.

BY MYRON ADAMS.

MESSRS. EDITORS:—Having lately completed twenty-four rods of wire fence, and knowing that many farmers intend building such fence if it is found to answer a good purpose, I am induced to give a detailed account of it, that others may profit by my experience.

In the first place I would premise that this fence extends from my house (which is situated on a considerable elevation) to the highway, and is therefore more expensive than ordinary fences upon the farm. At each end of the fence I set a large cedar post three feet in the ground, and brace it firmly in the direction of the fence. The brace is about eight feet long, and extends from the top of the post to a large stone placed firmly in the ground. Two other cedar posts are placed at unequal distances between the outside posts, on account of the irregular descent of the ground. All the other posts are of band iron, $1\frac{1}{4}$ inches wide, $\frac{1}{4}$ inch thick, and placed one rod apart. Intermediate posts are placed between these, extending only to the fifth wire, and made of half-inch band iron. All of these posts are punched with holes for the wires to pass through. The long posts pass through large flat stones, and are clinched on the under side. These stones are firmly bedded in the ground. The posts should be fastened in these stones by pouring around them melted lead or brimstone.

The wires used are Nos. 10 and 12, and I am confident these are the best sizes where a strong fence is required. In building, I commence by running the upper wire through first, which is four feet from the ground. The second wire is ten inches below the upper, both of which are of No. 10 wire. The third wire is eight inches below the second, and of No. 12 wire. The fourth wire is six inches below the third, and of No. 10 wire, and so alternating the two sizes of wire to the bottom. The distances of the remaining lower wires apart are 5, 5, 4, 4, 4, inches. The wires, after passing through the lower post, are fastened firmly, which I did by passing them through a strap of iron, and coiling the ends.

I don't know that I can describe the manner of straining the wires intelligibly, but I will try. At the upper end of the fence, after the wires have passed through the post, they also pass through a plank of the same width and height. Each wire is then passed through a roller $1\frac{1}{2}$ inches in diameter and 6 inches long, having one end tenoned for a crank. A board of the length and width of the plank is placed upon these rollers. After each wire is strained by turning the rollers, a pin is passed through the board and roller into the plank, which fastens them firmly. The wires will contract some in cold weather, and should not be drawn too tight, at first.

As to the expense, I cannot be as definite as I could wish, as some of the wire purchased was too small. I have used about 110 lbs. of wire, costing \$9·50; 20 iron posts at 6 cts. each, \$1·25; 20 short posts, at 3 cts. each, 60 cts.; 4 cedar posts, \$1, making \$4; painting, \$1: making an amount of \$16·35.

Since the fence was completed I have had it broken through once by an ox racing with a horseman. I have found that the wires break only where the ends are looped together. I have since joined them by flattening the ends, laying them together and winding them for four inches with a small wire. This is the manner of joining them at the Niagara Suspension Bridge. The wires of this bridge are boiled in linseed oil, which forms an impervious coating, and probably toughens the wire.

As to the strength of the fence, I think it sufficient to withstand any ordinary pressure. Wires of the same size at the Suspension Bridge are each strained to a tension of 1500 lbs. The great objection to this fence, in the minds of many people, is its being invisible. This is why I like it, as it does not mar the beauty of the landscape.

In conclusion, I would say that I like this fence, because the winds make no impression upon it—no snow-banks form beside it—it occupies no space—costs less than the painting of a good board fence, and, although invisible, looks beautifully when the ground is covered with snow; and as to its durability, if wire bridges will endure, surely wire fences will last an age.

East Bloomfield, N. Y., Dec. 1848.

WIRE FENCE.—HOW TO MAKE, CHEAPNESS, &c.

BY T. C. PETERS.

The experiment of Mr. ADAMS with wire fence, as detailed in the last number, is worthy of notice. The fence was more costly than it need to have been, and upon the whole would not be the thing for a long line.

I cannot do better than to ask you to copy an article on the subject, in the January number of "The American Agriculturist,"—premising, however, that I do not think it best to heat the wire, as I notice by an article in a late number of "The Prairie Farmer" that when the wire has been heated, it is apt to get bent, and gets out of shape. Perhaps Mr. ADAMS'S suggestion as to the alternate use of a larger and smaller strand is worthy of adoption. It would enhance the price but slightly. A further improvement might be made by training the Prairie Rose, or any other climbing rose, among the wires.

"I am glad to see the attention of farmers turned to this subject, as I believe at no distant day wire fence must become the leading kind generally over the Union. It is true that there is a difficulty in fencing against hogs, but even that can be overcome without much trouble, as is hereafter suggested.

"I have never as yet had any made, but intend to make a sample next spring. I have given the subject, however, a good deal of thought, and made inquiries and figures thereupon. From some small experiments I have made, there can be no doubt but my figures are mainly correct. I shall use No. 11 wire, cedar posts, as they are the most durable, and shall set them six rods apart, making the fence five strands high. The post being set, I should begin by boring an inch hole through each, at eighteen inches from the ground; then another hole eight inches from that, the next ten inches, then twelve inches, then fourteen inches; making the fence five feet two inches high. After the wires have been drawn through and strained tight, drive plugs into the holes at each side to hold them in their places. Between each post, and one rod apart, drive down a stake, saw into it opposite each wire, perhaps an inch, lay in the wire, and drive in a shingle nail to keep it in its place. It would be less trouble to drive a small spike into the post and wind the wire round it by one turn, rather than to bore the holes; though the expense would even be more.

"The wire ought to be prepared in the same manner that it is for bridges, boiled in linseed oil for a quarter of an hour, and then dried, and the same process repeated three times. This anneals and at the same time coats the wire, and saves painting it. If, however, there be but a small quantity to put up, it would be better to heat the wire, and afterwards paint it. Coal tar would also be an excellent substance for that purpose. Now for the expense:

A strand of No. 11 wire, 80 rods long, weighs 25 lbs.	
80 rods of fence would weigh 125 lbs., at 7 cents	$10·75
14 red cedar posts, 25 cents each	3·50
85 stakes, 1 cent each	0·85
Preparing wire and painting	1·00
Setting posts and stakes	0·50
Putting up fence, including spikes, or boring posts	1·00
Contingencies	1·00
Outside cost for 80 rods of wire fence	$17·60

This would be 22 cents per rod; but the actual cost to the farmer would not be 20 cents.

"On most farms, where there is plenty of timber for posts, it would not cost but about 16 cents per rod. But allowing for all contingencies, and that it costs 25 cents per rod, it is then by far the cheapest fence that can be built.

"In order to fence against hogs, I would drive down short posts and put on boards about two feet, and put the wires above, but nearer together. I think that no hog that ought to go at large would ever get through. For all other kinds of stock, it would be impenetrable. A neighbor of mine, who is compelled to fence against a whole village of street cows, put but two strands across a stream, where his fence was washed away, and it has proved a perfect protection. I have seen the cows walk up to it, but have never yet known one to attempt to get through, although the temptation between a fresh pasture and dry streets was very great, I have no doubt. T. C. P.

"*Darien, N. Y., November*, 1848."

WIRE FENCE.—A correspondent of "The Louisville Journal," writing from Ghent, Carroll Co, Ky., says:

"There has just been completed on the farm of Mr. WILLIAM HAWKINS, of this vicinity, some hundred and fifty or two hundred panels of this fence, which, for durability, neatness, and cheapness, far surpasses any thing that I have seen in the FENCE way.

"This fence answers the purpose of the strongest post and rail fence that can possibly be built, with not more than half the expense of the former. Mr. H.'s fence is constructed in the following manner: His posts (black locust) are first placed in the ground, say

eight feet apart, the first one being much larger and set deeper in the ground than the succeeding ones, because of the great resistance it has to make in stretching the wire. After the posts are properly arranged, grooves are sawed into the side of each post for the wires to lie in. The wires are placed one above the other from six to seven inches apart. The fulcrum and lever is then placed at the extremity of the wires to draw and tighten them. When they are sufficiently tight, they are secured firmly into the post by small staples made of wire. This fence sufficiently resists the encroachments of all kinds of stock, and costs only twenty-five cents to the panel.

"P. S.—The fence is capped with plank, which gives it additional strength and firmness."

THE NECESSARY CONSEQUENCES OF THE SEPARATION OF THE PLOUGH AND THE LOOM.

"*Eviction and Depopulation in Ireland.*—The process of eviction of tenants appears to be proceeding with great energy in some portions of Ireland. The *Limerick and Clare Examiner* reports that in one union in Kilrush, 13,000 persons have suffered eviction; 5,000 have been unhoused in the county of Limerick, and law processes are out for the demolition of 1000 houses more. Fifty houses have recently been emptied of occupiers, on the lands of Kildymo, and the demolition proceeds at a rate so sweeping, and so rapid, that on some properties 40 farm houses, of every description, have been dashed down in a day."

Like causes produce like effects. The man of Ireland is a slave to the landlord, who expels him, and destroys the house in which he has dwelt, that he may not return. The man of America is a slave to circumstances. He would prefer to remain at home, a consumer of food, combining his exertions with those of the producer of food, for the improvement of their common condition. Unable to do this, he is forced to fly to the West, and his neighbor who remains behind is compelled to waste on the road, and in distant markets, all the manure yielded by his land, and then he in his turn flies still further West, there to repeat the operation of exhaustion. Therefore it is that the papers of the South are filled with notices like the following:

"*Emigration to the West.*—The *Greenesboro (Ala.) Beacon*, of the 24th March last, speaking of the emigration westwardly, says: 'An unusually large number of movers have passed through this village within the past two or three weeks. On one day of last week, upwards of thirty wagons and other vehicles, belonging to emigrants, mostly from Georgia and South Carolina, passed through on their way, most of them bound to Texas and Arkansas.'"

The South abounds in rich lands, that need but a denser population to bring them into activity, with constantly increasing return to labor, and yet men are everywhere flying from their neighbor men, each seeking to roll his own log, though fully aware that two men, combining their exertions, can lift a log that a thousand, each acting separately, could neither roll nor lift.

"*Lumber and Freights in Maine.*—Several vessels have arrived at our wharves for cargoes, and, although our wharves are overburdened with lumber, the owners are afraid to ship it, knowing that, as the markets abroad now are, they must sustain a loss on all they might send off. Consequently, vessels must lie idle till the prospects brighten."—*Calais (Me.) Advertiser, April* 4.

Thus is it everywhere. The men, and the women, and the children, who should be at work in the factories of the East, consuming food, and requiring houses to be constructed out of the lumber of Maine, have been driven to seek the West, there to produce food, and to live in houses constructed with the logs of Iowa and Wisconsin, and the man of Maine suffers because the timber of the West is thus unnaturally forced into use. He

looks abroad in search of the market of which he has been deprived at home, and finds none. Let him unite with his neighbors in the determination to make a market on the land for the products of the land, and his prospects will speedily brighten.

Could the farmers and planters of the Union be persuaded to look around them at the fine trees by which they are everywhere surrounded, and estimate what would be their value, were looms and anvils brought into their neighborhood, to be wrought by men who would need houses, and mills, constructed of that timber, and who would aid in the construction of churches, and school-houses, and bridges, and rail-roads, and all other of the various improvements for which timber is required—could they be persuaded to estimate the value of the rich lands upon which grow those trees, and compare it with that of the inferior ones they now cultivate—and could they be persuaded to calculate the amount of taxes they pay on those lands, now so worthless, but which would then become so valuable—could they only be induced to do these things, we say, they would rise up as one man, and demand, (as a great national, and not a party measure,) the adoption of that course of policy which would most speedily bring the loom and the anvil to take their natural places by the side of the plough and the harrow.

PLANK ROADS.

As the system of plank roads is daily growing in public favor, and as we have vast districts of country, particularly in the South and West, in which any other system of improved roads is as yet totally out of the question—we give the following extract on this subject from a report made by George Geddes, Esq., Civil Engineer, Fairmount, Onondaga County, N. Y. On large plantations, where water or steam power is used, and where timber is abundant, these roads would probably pay well, even where laid down for private plantation purposes. They would effectually do away with the "hub-deep" condition of the roads on the rich alluvial lands in winter, and effect a saving of at least ninety per cent. in the labour of transportation from the gin or sugar house to the landing:

Plank roads have very recently been introduced into this country. According to the patent office report of January, 1843, they had their origin in Russia, and were introduced into Canada by Lord Sydenham, he being induced to try the experiment in consequence of the great cost, in the first instance, of McAdamizing a road, and the expense of keeping it in repair.

The first road made of plank was near Toronto. The three miles nearest the city having been McAdamized, the plank road commenced at that distance from the city, and was extended some miles into the country. The plank road lasted eight years, requiring during that time merely nominal repairs. The McAdam road, in the same time, required an annual expenditure of $400 a mile in repairs; amounting, in the eight years, to $3,200 a mile, a sum much more than sufficient to replank a road. When the plank road required a new covering, one-half of the stone road was dug up, and flung on top of the other half, and a track of plank eight feet wide was laid down in the place occupied by the stone. It happened that I visited Toronto at the time the plank road was rebuilding, and the eight feet track was being put into the stone road. The plank first used were sixteen feet long and three inches thick. They had worn out in the middle for a space of about seven feet wide—the ends of the plank being entire. The middle of the road had settled by the weight of the teams and loads that had passed over it. The sills were sound enough to justify their use for another covering. I saw the eight feet track in use, and then expressed the opinion that, as the narrow road was so much more evenly pressed down by the loads than was the wide road, it would be firmer, and that if more than one eight

feet track was demanded by the travel, it would be vastly better to lay two eight feet tracks, than one sixteen feet, not only because they would settle more evenly, but that the facilities for passing would be greatly increased. A road sixteen feet wide, experience proved, would be used in the middle. A wide load, going slowly along it, rendered it very difficult for a vehicle that was moving faster, upon overtaking the wide load to pass it. In making my report to the commissioners for the distribution of the stock of the Salina and Central Square Plank Road, at whose request I had visited Toronto, for the purpose of obtaining information upon this subject, I proposed two eight feet tracks for their road, and made my estimate of the cost accordingly. A year later I again visited Toronto, and to my surprise long planks were entirely abandoned. The road, as it was extended into the country, being made of a single eight feet track, having a smooth earth road to turn out upon, alongside the plank.

The result of these examinations was, that we determined upon making a single track upon one side of the centre of the road, and wherever we had ordinary earth to grade twelve feet wide upon the other side of the centre. Over some light sand we laid two tracks, and in one instance, for a short distance, we laid a sixteen feet road, owing to peculiar circumstances; so that we have a single plank track on one side of the road, and an earth road to turn out upon; and we have two tracks, four feet apart, of plank; and we have a wide plank road. The two separate tracks of plank are the most perfect road, and furnish the greatest facilities for teams to pass. The eight feet track is next in convenience, for it being on the side of the centre of the road that gives it to the loaded team that is going into town, (and the loading is chiefly going to town,) the unloaded team generally does all the turning out, while the loaded team travels on one side of the centre, and not in the middle of the road; while on the sixteen feet plank, the traveller inclines to keep the centre, and the slow movements of the loaded team, in turning out, very generally drives a light team off the ends of the plank upon sidling ground. When a team upon the single track is overtaken, it is much easier to pass it than it is when it is moving along the middle of the wide track; for the slow-going team is on one side of the centre, in the case of the narrow road, and there is a twelve feet earth road on the other side of the centre, for the fast-going team to pass by upon. The only way to make the wide track as convenient for passing as the narrow, is to grade an earth road, outside of the ends of the plank, and that would add to the cost, and make the road-bed so wide that it would be difficult to drain it well.

It has been proposed to fasten a scantling upon the middle of a sixteen feet track, leaving occasional vacancies for teams to cross from one side to the other, as a means of causing the travel to pass upon the ends of the track. This remedy for the evils of a wide single track, is expensive and objectionable from the inconvenience in crossing freely at any point.

Every view of the question results in this: that roads that are not greatly travelled require but a single eight feet track, save over very soft ground; and that roads that require more than one such track, should have two narrow tracks, in preference to one wide track. It is safe to say, that whenever two tracks are demanded, for the accommodation of travel, (unless the necessity grows out of the fact that the earth is very unsuited to road making,) that that demand will surely justify the investment of the money the second track will cost; for it must be a very great amount of travel that will not be accommodated by a single eight feet track, with a carefully cared for earth road to turn out upon alongside of it.

Experiments have been made to test the proper mode of laying the plank: "On the Chambly road the planks are twelve feet long, but laid diagonally, so as to make the road but eight feet wide. The weight of half the vehicle and load coming suddenly upon one end of the plank, and the other end not being kept down at the same time, the traffic constantly tends to disrupt the road, and the planks are loose, and spring from end to end." * * * "At Quebec, part of the road has been planked, the plank being laid lengthwise. It was considered that the planks would stand better the friction, and, when necessary, could be more easily taken up, and the road repaired. One strong objection to this mode of laying the plank is found to be, that the horses cannot keep their feet when much weighted, and are much exposed to falling, in consequence. Under all these circumstances, most have approved the manner in which the planks are laid on the Toronto road."—*Patent Office Report*, 1843, p. 129.

In constructing plank roads, it is necessary to have the earth upon which the plank are to be laid broken up and made fine, that they may touch the earth at every point. This is important, for if any space be left for air under the plank, or alongside the sills, dry rot follows. The sills should not be large: four inches square is sufficient. They should be perfectly bedded into the earth, and there should be broken earth under them, care being taken that they should not rest firmly upon rocks or other hard substances, that will not allow them to settle.

All earth formations of this nature will settle some, and the sills must be permitted to go down as the rest of the structure settles, or a space for air would be left between the plank and the earth, and the sills would thus support the plank; whereas the plank should rest upon the earth at every point. Nothing is gained by wide or deep sills, and the whole support of the road is the earth that is covered by the plank, and the amount is in no wise increased by wide sills. The chief use of sills is to grade by, and to keep the road in form until the earth has become settled.

There is, in the vicinity of Toronto, a short plank road that has no sills at all under it, and the grade is very nearly as exact as in those roads where sills are used.

The plank having been laid, the next thing is to grade a road some ten or twelve feet wide on one side, and two or three on the other, by taking earth from the ditches on each side, and bringing it by a ditch scraper just up to and even with the upper side of the plank, so that if a wheel runs off the track, it passes upon a smooth surface of earth. The ends of the plank should not be laid even, but a part should project from two to four inches by the general line, to prevent a rut being cut just along the ends of a plank. If the ends of the plank are even, and a small rut is made, the wheel of a loaded wagon will scrape along the ends for some distance before it will rise up to the top of the plank, unless the wagon moves in a direction nearly across the road; but if the wheel cannot move two feet forward without coming square against the edge of a projecting plank, the difficulty of getting on the road is avoided. It is not necessary to pin or spike the plank to the sills.

Perfect drainage must be secured, and to that end, the ditches must be deep and wide, and good sluices wherever the water crosses the road. This is the important point—DRAIN PERFECTLY.

The thickness of the plank must be decided by the amount of travel. If it is sufficient to insure the *wearing* out, and not the *rotting* out, of the timber, four inches is the thickness; if that thickness is not justified by the travel, then three inches should be used, but not less. The kind of timber is, too, a point that must be controlled by circumstances. Pine is used at

Toronto; hemlock on the Salina road; in some of the Western States it is likely that oak might be procured at a reasonable price. The number of feet (board measure) of lumber required for two sills four inches square, for one mile, is **14,080**; plank, three inches thick, for a single track eight feet wide, will measure **126,720** feet. The grading and laying a track will vary in cost, according to circumstances. When an old roadway is used, and hills are not to be cut down, or valleys filled up, it will not vary much from fifty cents a rod for one track.

In those sections of the country where lumber is cheap, plank roads must go into very general use; and, in some localities, it is the only road that can be made to endure the changes of the climate with any reasonable outlay of money. Less power is required to draw loading over them, and they are superior in every respect to McAdam roads—while they last.

PLANTING TREES.

THE most remarkable, if not the most culpable, neglect—that which indicates an unamiable and uncultivated, as well as improvident nature, is the omission, on the part of gentlemen in the country, to *plant trees* about their homesteads, for shade and ornament, if not for fruit and profit. Let any one who would be convinced how easy it would be to provide, in a few years, even in the most exposed and barren situations, all the beauty and luxury of a natural forest, only walk as far as the Lunatic Asylum, between Spruce and Pine streets, Philadelphia, and see how thriving is every one of the handsome trees so thoughtfully planted out there last autumn, at the instance of Mr. Cresson, in anticipation of the failure, some years hence, of the old sycamores. The work is only to be once well done, and the trees well protected, and then they may be left to endure for ever, as monuments of the good taste of the planter, transmitting his memory with gratitude to posterity.

We remember now, at the moment of scribbling this hasty but earnest exhortation to all our young friends to plant trees—maples, horse chestnuts, locusts, linden trees, (any thing but *Lombardy* poplars,)—that there is in the garden, near the house at Duoraghen Manor, Maryland, the classic residence of the late venerable Charles Carroll, of Carrollton, a weeping willow, stately and graceful, like she who planted it when a child, that will always be associated with the name of Mrs. Caton. How much more are such memorials to be coveted than monuments stained with blood and cemented with the tears of the widow and the orphan?

The Number of Dogs in the United States.—If it be within the power of those who are to give directions about the next census, we hope they will take measures to ascertain the *number of dogs*, male and female, in every county in our Union; and, if it could be done, it would be useful also to have a return of the number of sheep killed by dogs. At two cents per day, it is probable that the cost of dogs is equal to the value of our exports of grain and provisions to England this year; and it is not improbable that our sheep husbandry would add as much more to the wealth of the country, if it were not for the fear of having the sheep destroyed by dogs.

We are no enemies of dogs, of genuine blood, kept and used for their legitimate and appropriate purposes—all such will ever find in us staunch friends and defenders. But we have a great aversion to idle, useless whelps —*nati consumere fruges*—born only to consume the fruits of the land—whether they *go on four legs or two!*

PROFITS OF SHEEP HUSBANDRY.

We earnestly invite the attention of Maryland and Virginia farmers to the following. It will be seen that these sheep were kept on hay, being "foddered" twice a day during the winter, at least four or five months, and sheaf-oats once a day. Now we suppose this to have been done at a cost of at least seventy-five cents per sheep more than would be needed to keep sheep in *equally good condition* in Maryland, and South of that State. But in these States dogs steal in and kill, and thieves "break in and steal," and farmers are so much taken up with party politics, and party politicians care of course so little for a class who care so little for themselves, that no tax is laid on dogs, nor any penalty on the owners of such as destroy the farmers' sheep, nor any other measure taken to prevent so great an evil, or to indemnify those whose property is destroyed; and thus millions are lost, not only by killing them, but by *preventing the extension* of sheep husbandry, for which nature has provided in these States such abundant and peculiar resources.

MERINO SHEEP *vs.* NATIVES.

Messrs. Editors:—In "The Cultivator," of March 10th, is a communication from J. H. Rowley, on the matter of sheep. In that paper, Mr. R. attempted to prove the superiority of the native stock over the fine classes of sheep introduced from other countries, as a source of profit. Allow me to meet his statement, by showing what has been the result, as to a flock of merinos.

On Prospect Hill farm, Jamestown, R. I., Mr. D. W. Clarke has been the tenant for twenty-two years. At the time he took the farm, there was on it a flock of pure merino sheep. By some changes, the purity of the blood has been some little deteriorated, so that probably now it is about seven-eighths. Last year, in October, there were 146 ewes and 4 bucks. The ewes at that time were worth from $1·50 to $1·75 each. They were kept on hay during the winter, being foddered twice a day, and once a day were fed with oats in the sheaf. They were housed only in wet weather. At the lambing season, (about the middle of April,) there was added a portion of roots to the feed. Of these 146 ewes, 30 had twins, one had three lambs, and the other 115, one each. Of these, two perished. In May, the 31 ewes, with their 63 lambs, were sold for $4·50 each. The remaining 113 lambs were sold for $2 each. From the 119 sheep which were left, there were sheared 540½ lbs. of wool, a full average of 4½ lbs., which was sold at 30 cents per pound. The flock in the autumn was worth full as much as in the preceding autumn, that is to say, 115 ewes, at $2 each, making $230, and four bucks, at $8 each, making $32—aggregate, $262.

The ewes have begun again to lamb, and of eleven, five have borne twins. From these facts, it is not a sequence, that native sheep are most profitable.

RECAPITULATION.

146 Ewes, average worth in October, 1847, $1·62½,		$236·00
4 Bucks,	$7·00	28·00
		264·00
Sold 31 Ewes and Lambs @ $4·50		$139·50
113 Lambs @ 2·00		226·00
540½ lbs. of Wool, @ 30 cts.		162·15
		527·65

Present worth of flock, $262·00, making a clear price for fodder and care, of $525·65.

A. H. Dumont.

Newport, R. I., April 13, 1849.—*Boston Cultivator.*

The Hon. J. E. Pearce has been selected to deliver the next annual address to the Maryland State Agricultural Society.

ON STORING POTATOES.

LETTER OF INQUIRY FROM A VERY YOUNG PLANTER.

THE following is, or was, a mere private letter of inquiry, from the son of a valued friend, an eminent physician in Maryland. The writer had it at his option to pursue any one of what are called the *learned professions*, but very wisely, as we think, preferred the more quiet and independent life of a cultivated cultivator of the soil, though thereby, under the hopeful operation of our public sentiment and public institutions, he commits an act of self-excision from what are called public *honors—even those to be conferred by the cultivators of the soil themselves!* At present, any education, any treatment is good enough for those who are to *follow the plough!*—while the public predilection and the spirit of the laws tend to the elevation of professional men to all political distinctions; and to reserve for the military exclusively, education at the public expense, to be followed by life-commissions, certain promotion, and pensions and preferments almost hereditary.

Thus will it ever be, until farmers and planters have the sense to appreciate their rights, and the spirit to maintain their just supremacy in the control of the legislation of the country, and especially in the appropriation of public money for educational and all other public purposes.

Though this letter, of little importance in itself, was not written to meet any eye but our own, the reader will see with what motive and for what object we have taken the liberty to use it on this occasion. In view of these, we hope the writer will excuse us.

Doden, May 7, 1849.

MY DEAR SIR:—I take this opportunity to thank you for the useful little book on the "Elements of Agriculture," which you were so good as to send me. I hope to derive great benefit from its perusal, as I feel that farming is my vocation.

I would be greatly obliged to you for a plan to erect a potato-house. I have several in view, but would be very glad to know your views on the subject before commencing my operations. I hope, my dear sir, you will not consider this a liberty, but will favor me with an answer.

Yours, respectfully, DONALSON STEUART.

Office of "The Plough, the Loom, and the Anvil,"
81 Dock Street, Philadelphia.

Let me trust, my young friend, that instead of considering it a liberty, you will never hesitate to call on me when you may suppose that I can impart any information which can secure, for your agricultural labors and inquiries, results more profitable or satisfactory than they might otherwise prove. You shall not be disappointed, except for the want, on my own part, of two things for which I have discovered, when, alas, it is now too late, that I have been suffering all my life; to wit—*want of time, and of knowledge!*

It rejoices me to find you engaged in the study, as well as the practice, of cultivating the soil—the most important of all the arts and manufactures; because, whatever it may be in particular cases for individuals, agriculture is always the most profitable industry for the State. It employs more people, and in a more healthy and moral way, than all other pursuits, and, except what is used for seed, all its products are profit.

As to the best contrivance for *preserving potatoes*, you can best judge by considering the desideratum or end to be obtained—a proper medium temperature between too much cold and too much heat. The former would rot and ruin them, while the latter would stimulate their growth unseasonably. Keeping these conditions in view, a cellar under your barn or other out-building, into which the potatoes might be *shot* from the tail of the

cart, would be best, and most labor-saving. As they are of heavy and inconvenient carriage, if intended to be fed to your stock, the store should be as convenient as can be for that purpose. In their descent to the cellar, you might have a riddle so constructed and fixed at an inclined plane, as to separate the smallest from the larger ones. Potatoes may, however, as you know, be kept in conical heaps or in ricks, in the field, well covered with dry straw and a sufficient thickness of earth to exclude the frost, and on opening one of these kilns, for present use, the contents may be placed in barrels in the cellar. Mr. Colt, of Patterson, preserves his in a perfect state in barrels, filling the interstices with charcoal-dust from the factories. But your father has doubtless preserved his "Farmers' Library," in which case I recommend you to turn to Volume 2, where you will find the whole subject of potato husbandry presented fully and in every conceivable aspect.

The general principle, that every plant should have room to grow without depriving its neighbor of sun and air, is especially applicable to the potato, whose tubers can only be brought to perfection by a full quantity of those natural agencies; and numerous experiments have proved that the soil for potatoes should not contain rich and exciting manures, but any thing which acts mechanically by keeping it light and open, cannot be too highly recommended.

I regret that I have not leisure to go more fully into the subject; but as Mr. Crawford is still in the management of the Doden estate, you may safely defer to his judgment in a matter so practical. By-the-by, I learned with regret, from my friend General Steuart, that while mutual good-will and confidence between your father and Mr. C. would have prolonged their present business relations; the interest of the latter, in reference to his own property, may lead to a separation.

Much careful reflection, and a desire at once to do justice, and peradventure some good, lead me to re-avow the impression, that such men as Tilghman Crawford, by their industry, firmness, humanity, and practical skill in the management of agricultural capital, are eminently entitled to private and public esteem, far more than many successful political slang-whangers and demagogues, or the inventors of torpedoes and congreve rockets. Mr. C. can tell you that your potatoes should be lifted in dry weather, and without avoidable exposure to the sun, and put away where they may be kept at once dry and cool.

Mr. W. H. D. C. Wright is going, this year, more largely into the cultivation of potatoes, at his beautiful estate—Blakeford—in Queen Anne's County, encouraged by his success last year, in clearing, if I remember, more than $100 to the acre, on a considerable space of ground; but his barn-cellar being on the water's edge, he enjoys, over you, in location, great facilities for transportation to market. I believe all his crops have been fully doubled since that estate came into his hands, as they have been much more than doubled at Doden. I mention it to show, encouragingly, to young farmers, like yourself, what may be done by a free and sagacious use of labor and capital in *agriculture*, no less than in other pursuits.

Is it not, however, one among a thousand proofs of our careless and improvident husbandry, that the average yield of potatoes in our country falls so much under that of England, even more than our yield of wheat and other *corns*, as they call them? There, my impression is, that the average produce is not under 300 bushels to the acre, while in New York, for example, which is sometimes cracked up as a model State in agriculture, the average, in 1845, was not more than 80 bushels!—or is it that the land in England is for the most part—or the best portions of it—really and essentially more

fertile than ours? The question is the more worthy of consideration with me, for having heard Mr. Webster observe that to him the English soil seemed to have a rich, greasy, mulattoish cast, different from ours. I would not quote him as authority, for any thing that the public may generally know of him as a farmer, were it not that my own observations have led me to believe that he has a natural turn, and a penchant for agricultural life, as he is known to have for some rural pastimes. If he had been reared to farming, with the means of an Earl Spencer or Lord Yarmouth,* he would have been quite as eminent in agriculture as he is as an expounder of political constitutions—for he would have brought to its illustration the magnificent liberality of a Coke, and the philosophy of a Bacon. Do not suppose there is any disposition to compliment him on account of his high station, or the large space he fills in the public eye, for you have seen that my first tribute was paid, and with equal pleasure, to the *overseer at Doden—palmam qui meruit ferat.*

After all, the true inquiry and comparison for you, as a practical planter, to institute is,—how much clear profit, deducting cost of labor, &c., the same field will yield in wheat, corn, tobacco, potatoes, and other crops: keeping an eye to what is too often overlooked, viz.: what each crop will return to the land, in its offal, and in what state it leaves the land for subsequent crops in an *improving rotation?* But, my young friend, is there *any limit* to the field of intellectual research for the young farmer who enters on the profession, as I trust you have done, with firm intent to make it a source of useful and entertaining investigation, as well as of profit?

Well, I apprehend that by this time you begin to think my allegation of *want of time* is "all gammon!" The truth, however, is, that it so delights me to see well-bred, well-educated young gentlemen, who have "the world before them, where to choose," voluntarily betaking themselves to agriculture, to be followed, not as a mere drudgery, but as a profession that affords scope for mental exercise and excellence; that I am liable to be carried away by that enthusiasm which all my life, and in the midst of various public occupations, has led me to do what I could to encourage and honor such a disposition.

Heretofore, and in more prosperous circumstances, it has been done none the less zealously than now, that for bread, and as the only means or hope of procuring it, I am laboring to the same end in "The Plough, the Loom, and the Anvil."

If you can find any friend to unite with you in patronising my journal, commencing either with the first or with the second volume, next month, (July,) I trust there is no harm in saying, frankly, that you will much oblige one who for more than thirty years has been incessantly striving to elevate and benefit the various industries of the country, and especially that which you have chosen to follow as your "vocation!"

Respectfully, and with best wishes, your friend, J. S. SKINNER.

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* GRIMSBY.—The visit of Prince Albert to this town, to lay the foundation stone of the new docks, which will one day make Great Grimsby one of the first ports of England, is of memorable event in the history of Lincolnshire. The Prince left town on Tuesday for Brocklesby, the seat of the Earl of Yarborough. Nothing could surpass the affectionate and loyal reception which the prince met with at every stage of his journey, and when, in the afternoon, he reached Brockelsby, he found, drawn up in front of the hall, the whole of Lord Yarborough's tenantry, *to the number of* 500 *or* 600, *all mounted, and presenting, as may be imagined, a very striking and interesting appearance. Many of them wore tight cords and top-boots, and, firmly seated on their hunters, revealed at a glance the favorite pastime of the North Lincolnshire farmers.* Whether young men or old, the prince saw in their open and manly countenances, the true yeoman spirit blended with the contentment which a succession of kind and liberal landlords never fails to inspire in their tenantry. A more interesting sight, without the slightest tincture of theatrical effect, could hardly be witnessed.

[From the Wool Grower for May.]

THE WOOL TRADE.

We next give a statement of the price of wool in Philadelphia, on the 1st of July, and for the three preceding years. Sales were not, however, made at those prices, except at a very small extent, as the market was decidedly dull.

The following comparative statement of the prices of wool on the first of July, during the last four years, may not be uninteresting at this time:—

	1848.	1847.	1846.	1845.
Prime or Saxony,	36 @ 40	38 @ 42½	31 @ 33	39 @ 41
Full blood,	31 @ 33	35 @ 36	30 @ 31	35 @ 38
3-4 "	28 @ 30	33 @ 34	28 @ 29	33 @ 35
1-2 "	26 @ 28	30 @ 32	26 @ 28	32 @ 33
1-4 " and common,	25 @ 26	29 @ 30	25 @ 26	28 @ 31
No. 1, pulled,	25 @ 27	28 @ 29	23 @ 25	28 @ 31
" 2, "	21 @ 23	22 @ 23	18 @ 19	22 @ 25
Merino, "	28 @ 30	31 @ 33	28 @ 29	32 @ 35

And we close by giving the prices current in New York and Boston, March 30, 1849.

Saxony fleece,	40 @ 47½
Merino,	37½ @ 40
" 3-4 to full blood,	33 @ 37½
Common,	30 @ 33
" pulled, No. 1,	25 @ 27
" " super,	28 @ 30
Lambs,	— @ —
" country pulled,	35 @ —
" super,	— @ 33
" No. 2,	— @ 17

The markets, however, are bare of wool. Some manufacturers have fair stocks, but generally not enough to more than last them into the next clip.

Wool did not materially advance until last February, when it went rapidly up to its present price. But we do not believe these prices can be sustained, especially upon the coarser qualities, because the money market continues stringent; nor is there much prospect that it will be so abundant as many have anticipated.

Many, last year, were anxious for us to give some price that we thought might be realized for wool, at the Buffalo Depot. We did so, and subsequent events proved our estimate true; but sales were not made rapidly, and we have been blamed because we could not get those prices. All we can do, is to give facts, and our opinions based upon those facts.

We expect to realize within the following range, and can see nothing in the way to prevent us.

No. 1,	34c to 38c	Super,	45c to 56c
" 2,	32 " 35	Extra,	40 " 45
" 3,	28 " 32	Prime,	35 " 39
" 4,	27 " 29	Long combing,	27 " 30
" 5,	23 " 25	Short "	25 " 32

Mr. Vail's Sale of Short-horns.—Those who wish to lay a sure foundation for a herd of pure short-horns, ought to bear in mind that Mr. Vail's sale comes off at Troy, on the 13th day of June. His herd is more or less of the celebrated Bates's stock, often referred to in advertisements of short-horns in England, as the "crack" stock of the United Kingdom. The cow "Peach," of the short-horn blood, exhibited at Smithfield, in 1843, weighed, when slaughtered, 1770 pounds.

DUCKS.

"YOUNG ducklings had better not be cooped, but should be confined to a dry, warm yard, for some days at least, lest the mothers should drag them out too early on the wet sward, before the dews have been absorbed by the sun's rays. Wet, damp, and cold, are always fatal to young poultry chicks of all sorts, producing either scouring or the cramp, when, becoming very weakly, if they do not die at once, they are liable to be trodden under foot by the mother, particularly if cooped. In warm, dry weather, they may take to the water at any time without detriment. In the artificial state, ducklings require, like turkey chicks, to be assisted by a few crams of barley meal, or pollard, two or three times a day. In Ireland, they mix boiled nettles with their food, upon which both thrive admirably. Soaked bread, or too much wet food, is injurious. 'Remains of boiled potato' should be dry and free from salted gravy, and the like, from the table. Duck eggs set under a hen is more convenient, and the young ones are not so liable to be trodden down, but it is painful to witness the anxiety and trepidation of the poor foster-mother when the little ones take to the water."

There is one mistake in the above: "In warm, dry weather, they may take to the water at any time without detriment." It seems almost a paradox in *Duckology*, but young ducks should be kept from the water until the *down* which covers them when hatched has been superseded by a coat of *feathers*. Then they may go swimming *ad libitum*. Keep them from the water when young, follow the directions above, and give them animal food, fresh, chopped up, and you may raise as many ducks as you please.

THE MARYLAND AGRICULTURAL SOCIETY held its quarterly meeting in its own, central, spacious, and convenient Hall, in Baltimore, on the 2d ult. The President of the Society, Mr. Calvert, supported and encouraged by the President of the Montgomery County Society, A. B. Davis, and the President of the New Castle County Agricultural Society, in the fulness of their zeal, were all in attendance, with many other gentlemen whose presence indicated that the right spirit is abroad, and the best influences at work.

We have not room to note the proceedings, except to say, that a committee was appointed to make arrangements for the next exhibition, in October; and resolutions were adopted to memorialize Congress for an appropriation of public lands, for the establishment of institutions in each State for agricultural education; also, for getting, through the Vice-Presidents, resident in each county, a return, in the form of an estimate, of the number of dogs in each county; as an incipient step towards the enactment of some legislation, to prevent or diminish the destruction of sheep by dogs. One gentleman present said it was believed that two thousand had been thus destroyed in his county within the past year.

Deserved Testimonial.—The Massachussets Horticultural Society at its last meeting presented to the Hon. M. P. Wilder, the late President of the Society, a massive silver Pitcher, superbly chased and wrought, and bearing the following inscription:—

HON. MARSHALL P. WILDER,

President of the Massachusetts Horticultural Society, from A. D. 1841 to 1849.

This Piece of Plate is presented by the Society, as a testimonial of respect and appreciation of his valuable services during the above period.—January, 1849.

Mr. Wilder has eminently deserved this gift, for his services in behalf of the Society have been numerous and enduringly valuable.

THE "TABLES OF EXPORTS," at pages 644–5, which must have cost much labor and inquiry to make them up, should have been credited to that valuable, excellent journal, "The Philadelphia Commercial List."

THE FARMING INTEREST.

"It is supposed," says 'The Maine Farmer,' "that three fourths of the population of the country are employed in agriculture; the other quarter being divided among all other employments and professions. Besides, the mechanic, the manufacturer, the merchant, and the professional man, are all mainly dependent upon the farmers for patronage and support. When the farmers, as a class, are prosperous, all the others participate in their prosperity. From this it follows, that whatever benefits the agricultural class, directly benefits three-fourths of the people, and indirectly benefits the other fourth.

"Surely, then, the farmers have a right to demand of government the means to sustain their agricultural societies, and to collect and disseminate important information relative to their calling. Let the light of science and education be brought to the aid of agriculture. Let our resources be developed, and the skill and industry of the husbandman be directed into their proper channel, and results would soon be obtained, in which not only the farmer could rejoice, but the whole community with him.

"These are the right sentiments, and every paper having the true interests of this noble branch of industry at heart, should make them known, should strive to enforce them, by calling upon our government, that, in fostering and promoting other great interests, this, the greatest of them all, should not be overlooked, but come in for its full share."—*Germantown Telegraph.*

In the enumeration here given of the various classes into which the community is divided, the writer has overlooked one, that is, of all others, the most opposed to the prosperity of the agricultural interest—that of *politicians.* To support them, and their children, and their friends, it is necessary that we should have fleets, and armies, and military academies, and naval academies, and foreign ministers, and *chargés d'affaires*, and secretaries, and bearers of despatches, and legions of other officials; and to find employment for them, or to give excuse for the payment of them out of the treasury, we must have occasional wars with Indians, or Mexicans, and thus we make occasion for large expenditure, needing large revenue. Thus, when the farmer or planter desires protection against the perpetual revulsions of England, he is met by the objection that it would diminish the revenue. It is deemed better to consume foreign food, in the form of cloth, and iron, than home-grown food, in similar forms, because it will increase the revenue. If the farmer, then, complains that he has lost his market, by the closing of the furnaces, he is answered, that the revenue has increased, and the temporary prosperity of the treasury is deemed an abundant compensation for the permanent exhaustion of the land and its owner.

The farmers "*have* a right to demand of the government the means of maintaining their agricultural societies," and the sooner they insist upon the exercise of that right, the better it will be for them. They "have a right" to insist that the consumer shall be brought to take his place by the side of the producer, that they may be enabled to live in closer connection with each other, cultivating rich soils instead of poor ones, economizing the labor of transportation, returning to the land the refuse of its products, and restoring the poor lands, already exhausted, and thus increasing their means of obtaining better food, and improved implements, and newspapers, and magazines, and books, that now they cannot buy, because our system, perpetually vacillating, has tended to exhaust the land, to compel men to fly from each other, and thus to deprive them of the stimulus to exertion which is found always to exist where there is a market for apples, and pears, and peaches, and plums, and cabbages, and potatoes, and turnips, and carrots, and mutton, and veal, and beef—but which never exists where men are compelled to cultivate wheat, or cotton, because they can find a market for nothing else. The policy is wise which tends to draw men together—combination increases power, and promotes civilization. The policy which tends to leave men to depend on distant markets, is a foolish one, as it scatters them, and prevents combination and improvement.

THE HERON AND THE BITTERN.

THERE is a fine heronry at Sir Henry Fletcher's park, Walton-on-Thames. The nests are built on the top of some of the finest fir-trees in the kingdom, and appear somewhat larger than those of the rook. These birds must go an amazing distance to provide food for their young, as I have been assured that the bones of sea-fish have been found under the nests. They appear to be slow and heavy fliers.

A young bird from this heronry, having fallen out of the nest, was taken away in the evening by a gentleman, who carried it to his house at some miles' distance, and turned it into a walled garden that night. The next morning, one of the old birds was seen to feed it, and continued to do so till the young one made its escape. This bird must have gone over a very considerable space of ground in search of its young.

A large assembly of herons takes place at certain times of the year in Richmond Park, where I have counted from fifty to sixty at a time. Sometimes they may be seen on the tops of trees, and at others on the ground at a distance from the ponds, appearing perfectly motionless. This assemblage is very curious. The nearest heronries to Richmond Park are the one near Walton-on-Thames, and that in Windsor Great Park, both of which would scarcely furnish the number above mentioned. There seems to be no reason why these birds should congregate and remain for so long a time in the listless manner in which I have seen them; nor why the birds from two heronries should meet at the same time in a place so far distant from their usual haunts. It is seldom that one sees more than two or three herons together in the same place, and then only when they are watching for their prey.

A bittern (*Ardea stellaris*) was lately shot by one of the keepers in Richmond Park. Though nearly dead when he was going to pick it up, it showed great ferocity.

From the scarcity of this bird in England, few people are acquainted with the dismal noise it sometimes makes. Mr. Rennie describes it in a very picturesque manner.

"Those," he says, "who have walked in a summer's evening by the sedgy sides of unfrequented rivers, must remember a variety of notes from different water-fowl; the loud scream of the wild goose, the croaking of the mallard, the whining of the lapwing, and the tremulous neighing of the jack-snipe. But of all these sounds there is none so dismally hollow as the booming of the bittern. It is like the interrupted bellowing of the bull, but hollower and louder, and is heard at a mile distance, as if issuing from some formidable being that resided at the bottom of the waters. This is the bittern, whose windpipe is fitted to produce the sound for which it is remarkable. These bellowing explosions are chiefly heard from the beginning of spring to the end of autumn; and are the usual calls during the pairing season."

I have been informed by keepers that, if they wound a bittern, it requires great caution in taking it up, as it will frequently dart its pointed beak at their faces, and it always makes a vigorous resistance. Mr. Bingley says that this bird will wound the leg of the sportsman even through his boot; and that it sometimes turns on its back, and fights with both its bills and its claws. When surprised by a dog, it is said always to throw itself into this posture.

THE BAT.

"Now air is hush'd, save where the weak-eyed bat,
With short, shrill shriek, flits by on leathern wing."—COLLINS.

IT is probable that we had formerly a larger breed of bats in this country than we find at present. One of the workmen employed in the repairs of Cardinal Wolsey's Hall, in Hampton Court Palace, brought me the skeleton of a bat, which he found at the end of one of the rafters of the ceiling. The animal, when alive, must have been as large as a pigeon. The *hooks* were very strong. The natural history of the bat is very curious, and we have some particulars respecting it in M. St.-Hilaire's work, to which I have already referred in speaking of the mole. The claws of the hind feet of the bat are all of an equal length, and thus better adapted for enabling the animal to suspend itself, which it does with the head downwards, that being its natural posture of repose. By adopting this attitude, the bat, on being disturbed, can readily disengage itself, and dropping into the air, can take flight immediately. The wings of bats serve them as a sort of mantle or cloak when at rest, and in which they sometimes also cover up their young, though they will at other times fly about with two of them hanging to the breast in the act of sucking. The wings, by their delicate structure and extent, serve as feelers to the animal in guiding its flight

in the dark. The celebrated naturalist Spallanzani ascertained this to be the case, by the following experiment:—He hung up some cloths across a long room, with holes in them here and there, large enough for a bat to fly through. On turning loose some of these animals, which he had previously deprived of their sight, and, as much as possible, of their hearing, he found that they flew without the least difficulty through the holes in the cloths. It is inferred, that as they did not any where touch the cloth, they must have been warned of their approach to it by feeling the repulse of the air set in motion by their wings, and have distinguished the hole by no such reaction taking place. This is analogous to the case of a blind boy, who on coming towards a person, standing perfectly still in a room, when he had approached within a short distance, suddenly stopped, stamped with his foot, and then turned off to one side. This boy must have perceived a difference in the action of the air. But I once observed a still more extraordinary instance of this susceptibility in discovering danger, in the case of a blind horse. I was in the habit of driving this horse in a gig, and by way of experiment I often brought him suddenly up to a closed gate, through which he had probably never before passed, but he always stopped short, and I never could force him against it. This horse was perfectly blind, and must have avoided the gate in consequence of perceiving that there was some immediate intervening object which obstructed that current of air which he had previously been conscious of. We know that a blind horse will sometimes step into a hole or a ditch, but he rarely runs himself against a post or a tree. It may be thought that, in these two last instances, the *ears* assisted in guiding, probably by their being able to perceive a difference in the sound of their step.

But to return to the bat. She will sometimes settle on the ground; and when she does this, she shuts up her wings, and is then able to walk, and even to run, at a good pace, though awkwardly. She probably only alights in search of food when she is unable to procure it on the wing. When on the ground, she runs to find some eminence from which she may raise herself into the air. Bats hybernate by getting into concealed places for security, and they then wrap themselves up in their wings.

They are gregarious animals. Vast numbers of them were lately found under the roof of an old building in Richmond Park. I had two sorts of them brought to me, nearly similar in shape, but one very considerably larger than the other. This latter is probably the *Vespertilio altivolans* mentioned by Gilbert White. It measured nearly fifteen inches from the tip of one wing to the tip of the other. Its ears were very short, and its fur of a chestnut color. The place where it was found had a most offensive and noisome smell. These larger bats were quite as numerous as the smaller species.

MANUAL OF MANNERS.

CONVERSATION.

This is a subject which requires the utmost tact and discretion. Conversation depends generally on subjects started by chance; but the tone of the conversation of modern society is too often of an insipid nature. It consists, in a great measure, of vain compliments, the current rumors of the day, idle jests, superficial wit, scandal without end or purpose. How few are able to sustain a serious conversation, or prolong a useful one!

Chit-chat, which is generally harmless, is always amusing; but every thing savoring of scandal ought at all times to be strenuously avoided.

In conversation you should speak only of matters of which you know something. Never venture upon any subject of which you are ignorant, unless it be for information. If you wish to secure attention, address yourself to the capacity of those to whom you speak, by not appearing to be more learned than they are; by which means you may draw out their knowledge, which otherwise they will keep to themselves. It is common enough to hear persons who have acquired a smattering of science constantly using technical terms, but which they frequently misapply. The truly learned make no such pretensions. They find their own language sufficient for the expression of their sentiments, and they eschew every thing that savors of affectation or pedantry. It is painful to hear a person laboring to show his learning, while all the time he may be only exhibiting his ignorance. In conversation all that is required is to speak to the purpose. The best-informed are generally the least pretending. They speak little even of those matters of which they know most, and they never take it upon them to express themselves decidedly on any matter of which they are not sufficiently informed.

When you speak of religion, or about religious matters, let it be with reverence; and

never give any countenance to profanity or levity, when uttered by any one in your hearing. Remember that evil communications corrupt good manners. To be witty at the expense of religion is the sign of a depraved mind and a corrupt heart.

Never dispute about sacred things. It is often the case that those who appear most addicted to arguing about theology, are not only ignorant of the first principles of religion, but have generally very little religious principle.

Avoid, if possible, touching upon subjects which you have reason to know will be displeasing. It is somewhere truly said,—"There are particular things that touch a man's pride too nearly to be spoken of lightly." Have regard, therefore, to the feelings of those with whom you converse. Politeness will teach you the tact of directing the conversation to such topics as you know to be agreeable, or in which you believe those in whose company you may be are most versant.

Good humour, when it is kept within bounds, is the charm of conversation, which is always the better for a little seasoning of wit. But, as has been remarked, wit without wisdom is a dangerous weapon. To take upon you to furnish mirth for the whole company is not only undignified, but you will find it an arduous task. The professed wit, though his company may be courted, can never himself be esteemed. A harmless jest will enliven the conversation, although it may be lively enough without jesting. A good thing, whatever the proverb may say, is always the worse for being repeated; and whether it is heard or not when first uttered, it should never be twice spoken. The beauty of these things is their point; and to give *that* effect, they must come trippingly off the tongue.

It is not contrary to good breeding to laugh in company, and even to laugh heartily, when there is any thing amusing going on: this is nothing more than being sociable. To remain prim and precise on such an occasion is sheer affectation. Keep a strict guard, however, over the propensity to ridicule; for this is a species of wit that is not always understood, and may be unpleasantly resented. To crush a jest in its first conception is preferable to giving utterance to what may hurt the feelings of another. "A witty saying often leaves a mortal wound."

It requires a great deal of temper to bear with satire. Rochefoucault says, "Raillery is more insupportable than reproach." An innocent joke, however, is harmless. Never allow a supercilious smile to be seen on your countenance, nor permit yourself to sneer at any one. "No debt is so surely or so liberally repaid as contempt."

To jest on the sorrows or the misfortunes of another, or to ridicule bodily defects, is heartless and unfeeling.

Avoid punning. That trifling kind of wit, although not deserving of the severe reproof of Dr. Johnson, that he who would be guilty of perpetrating a pun would pick a pocket, is nevertheless unworthy of a man of education or breeding. The unlettered do not comprehend, and the really learned do not countenance it.

In conversation, you will find it the best way not to be ambitious of saying smart things. Every one, however, is now more brilliant than his neighbor, and one is almost forced to be witty in self-defence.

There is nothing more annoying than interruption, except perhaps contradiction. The person who is speaking to you, whoever he may be, or on whatever topic, except a personally insulting one,—for that admits of no license,—is entitled to a patient hearing; and, when a question is asked, courtesy requires that a reply of some kind or other should be immediately given.

Contradiction is the greatest rudeness any one can be guilty of, and many persons will not brook it, for it creates a sort of revulsion in the feelings which it is sometimes difficult to control. Those who possess a high idea of their own merit, as well as persons of an argumentative disposition, are apt to be guilty of this gross breach of good manners. From the vehemence with which some persons maintain their opinions, it should seem as if the welfare of the world depended on the matter in dispute. The folly of argument is apparent in this, that nothing is gained even although the point in contention should be conceded. It is better, however, to make some concession for the sake of peace, than provoke or prolong any altercation or dispute, about a matter too, which, after all, may be of the most unimportant nature. Argument, where entered upon, should be conducted in a mild and gentlemanly manner; in which case it tends to enliven the conversation, which might otherwise become dull, by uniformity of opinion.

Public topics form fit subjects for conversation. Matters purely confidential ought never to be introduced. Keep faithfully the secrets that are intrusted to you; but, for your own peace, never be anxious to obtain the confidence of another.

He who loves to indulge in idle babble shows himself unreasonable, and to a certain extent dishonest, for he occupies the time which might have been employed in listening to some person of sound information and

good sense. It was well observed by Goethe, that of "all thieves, fools are the worst; they rob us of both time and temper." It is difficult to say which is most objectionable, —a silly timidity which prevents a man from opening his mouth, or a flippant presumption that prompts him to engross all the conversation to himself. We may endure the silence of the one, when we cannot tolerate the empty noise of the other.

It is impossible to prevent people from talking of themselves and their own affairs. At all times avoid this mark of a vain and little mind, which obtains no sympathy; for, as Shakspeare says, "What is Hecuba to me, or I to Hecuba?" If you are prone to speak too much of yourself, you will be apt to become tiresome; if too much of others, censorious. A knowledge of the world is of immense advantage in this respect. There are people so conceited, that they have always tact enough to direct the conversation to matters concerning themselves; while many there are who take a pleasure in complaining of their lot, and of the dulness of the times.

It is allowable in some cases to conceal our sentiments; but we ought never to do so for the purpose of deceiving others. Make it a rule never to give utterance to falsehood: in all circumstances, and whatever be the consequence, adhere to truth. To be detected in any subterfuge, is to subject yourself to continual suspicion; for no credit can ever be given to one who has once been convicted of an untruth. Though neither truth nor sincerity oblige us to speak what we think in all cases, we should in no case say what we do not think.

Truth is the best ornament of conversation. If you have to describe any thing, narrate the matter as it happened, plainly and concisely, without being too diffuse on the one hand, or too minute on the other.

Speak not too loud, nor yet too low. The former may bring on you the accusation of rudeness; the latter, subject you to the charge of whispering—which is at all times an invidious thing.

Never use oaths in conversation. Swearing is the mark of a vulgar as well as of an immoral man, and says very little for his head or his heart. The well-bred make use of neither offensive names nor contemptuous expressions. Some people say rude things without any intention to offend: on the other hand, there are many, especially among those who do not possess much merit, who are too ready to take offence at what is said by others.

Rousseau justly remarks, that "the tone of good conversation is neither dull nor frivolous. It is fluent and natural; sensible, without being pedantic; cheerful, without being boisterous; elegant, without being affected; polite, without being insipid; and jocose, without being equivocal. It deals not in dissertations or epigrams; conforms to the demands of good taste, without being bound by rule; unites wit and reason, satire and compliment, without departing from the rules of a pure morality, and allows all to speak on subjects which they understand. Each one expresses his opinion, and supports it, in as few words as possible; and no one attacks that of another with warmth, or upholds his own with obstinacy. All impart information, and all are entertained."

Considering the value of good conversation in improving the mind, and giving a tone to the manners, it is strange how few parents think it worth their while to instruct their children in the art. "A considerable part of their time in schools," it has been well observed, "is spent in acquiring facility in written composition; and yet, have we not occasion to relate a hundred times, where we have only occasion to write once?"

In conclusion, the young and inexperienced are seriously advised not to presume to give an opinion upon every subject indiscriminately, as some do who ought to know better. Rashness of decision is no proof of judgment; and a professed critic, like a professed wit, gains few friends, though both may have their admirers. Silence is often all that is requisite to preserve esteem; and a well-timed modesty will prevent those weaknesses of character from being observed which all are apt to betray in thoughtless or idle conversation.

On the subject of behavior in company, Legh Richmond gives the following excellent advice to his daughters:—

"Be cheerful, but not gigglers. Be serious, but not dull. Be communicative, but not forward. Be kind, but not servile. Beware of silly, thoughtless speeches; although you may forget them, others will not. Remember God's eye is in every place, and his ear in every company. Beware of levity and familiarity with young men; a modest reserve, without affectation, is the only safe path. Court and encourage serious conversation with those who are truly serious and conversible; and do not go into valuable company without endeavoring to improve by the intercourse permitted to you. Nothing is more unbecoming, when one part of a company is engaged in profitable and interesting conversation, than that another part should be trifling, giggling, and talking comparative nonsense to each other."

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